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Court, U.S.
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No.

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IN THE

Supreme Court of the United States

SANYO NORTH AMERICA CORPORATION AND SANYO
MANUFACTURING CORPORATION, PETITIONERS

v.

HARRIS CORPORATION, RESPONDENT

PETITION FOR A WRIT OF CERTIORARI
TO THE UNITED STATES COURT OF APPEALS
FOR THE FEDERAL CIRCUIT

PETITION FOR A WRIT OF CERTIORARI

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QUESTION PRESENTED

Application of doctrine of equivalents to expand the enforceable scope of a patent claim is restricted by several legal limitations, one of which—prosecution history estoppel—the Court clarified in *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 535 U.S. 722 (2002) (*Festo* VIII). This petition requests similar clarification of application of the all-elements rule, another legal limitation on the doctrine of equivalents that is closely related to the important "definitional and public notice functions of the statutory claiming requirement" noted in *Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 29 (1997). The question is:

> Whether the courts below erred by failing to determine the applicability of the all-elements rule to the scope of asserted equivalents as a matter of law, contrary to the Court's directive in *Warner-Jenkinson*, 520 U.S. at 39 n.8.

RULE 29.6 STATEMENT

Petitioners are Sanyo Manufacturing Corporation and its immediate parent, Sanyo North America Corporation. Both are subsidiaries of Sanyo Electric Co., Ltd., which is the only publicly held company that owns more than ten percent of either Petitioner's stock.

The sole Respondent is Harris Corporation.

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Miscellaneous:

American Intellectual Property Law Association, 1999 Economic Survey at 77 5

American Intellectual Property Law Association, 2003 Economic Survey at 22 6

Riedinger, Jerry A., "The Future of the Doctrine of Equivalents," American Bar Association Section of Intellectual Property Law, IPL NEWSLETTER, Vol. 21, no. 1, p. 6 (Fall 200) 29

Schwartz, Herbert F., PATENT LAW AND PRACTICE, (4th ed. 2003) 15

U.S. Pat. & TM Office, MANUAL OF PATENT EXAMINING PROCEDURE (MPEP) 15

PETITION FOR A WRIT OF CERTIORARI

Sanyo Manufacturing Corporation and Sanyo North America Corporation (Sanyo) respectfully petition for a writ of certiorari to review the judgment of the United States Court of Appeals for the Federal Circuit in this case.

OPINIONS BELOW

The decisions of the district court, App. 49a-50a, 66a-70a, are unreported. The special master's patent claim construction report, App. 17a-48a, adopted by the district court, App. 49a-50a, is unreported. The special master's summary judgment report, App. 51a-65a, adopted by the district court, App. 66a-67a, is unofficially reported at 2000 WL 34204431.

The Federal Circuit majority and dissenting opinions, App. 1a-14a, and denial of rehearing and of rehearing *en banc*, App. 71a, are unreported.

JURISDICTION

The judgment of the court of appeals was entered October 29, 2003. App. 1a. A timely petition for rehearing was denied December 29, 2003. App. 71a. The petition for writ of certiorari accordingly is due no later than Monday, March 29, 2004. The jurisdiction of this Court is invoked under 28 U.S.C. § 1254(1).

RELEVANT PROVISIONS

Article III, section 8, clause 8 of the U.S Constitution; the jurisdictional statute, 28 U.S.C. § 1338(a); and pertinent parts of the Patent Law, 35 U.S.C.§§ 111, 112, 131, 132 & 271; and a pertinent part of the Television Decoder Circuitry Act of 1990, 47 U.S.C. § 303(u), are reproduced at App. 72a-75a.

STATEMENT

This case is an action for patent infringement. The district court had jurisdiction pursuant to 28 U.S.C. § 1338(a).

This petition involves important questions of federal law and policy concerning one of the principal legal limitations on the scope of permissible equivalents under the patent law's doctrine of equivalents. In particular, it involves the lower courts' failure to apply properly the all-elements legal limitation to determine the scope of permissible equivalents, as directed in *Warner-Jenkinson Co.* v. *Hilton Davis Chem. Co.*, 520 U.S. 17, 39 n.8 (1997).

The dispute in this case is an essentially linguistic issue, akin to that of patent claim interpretation: whether or not the system providing certain character color changes in the accused Sanyo receivers can be equivalent to the system providing "dot pattern modifiers" claimed in the patent-in-suit.

Petitioners obtained a partial summary judgment of no literal infringement. The district court conducted a jury trial of doctrine of equivalents infringement issues without any judicial ruling on the permissible scope of equivalents. On appeal, the panel majority said nothing about the permissible scope in terms of the all-elements rule.

1. This case involves U.S. Patent No. 4,290,064 ("the '064 patent," Sanyo Exh. 3, Fed. Cir. Appendix

A510), one of two patents resulting from a project of Harris Corporation (Harris) to develop a computer terminal in the late 1970's. Although the other patent, No. 4,290,063 ("the '063 patent") also was involved in earlier stages of this litigation, it is no longer in issue because the Federal Circuit reversed the verdict of infringement of that patent. App., 2a, 4a-8a.

As part of Harris' project, a Harris employee made improvements in systems for displaying characters in the form of dot patterns. Those improvements were described and claimed in two patent applications. Following examination by the Patent and Trademark Office (Patent Office), those applications issued on September 15, 1981 as the '063 and '064 patents.

2. The video displays in television receivers and computer terminals are composed of a series of dots, which are selectively illuminated to form the video image. Characters, such as letters, numbers and symbols, can be displayed in the form of "dot patterns." See App. 8a-9a, 17a. For example, Fig. 21a of Harris' prior art U.S. Patent No. 4,204,207 (Bakula), reproduced below, depicts a pattern that could represent the numeral "0" (zero). Sanyo Exh. 10.

The '064 patent discloses and claims systems for providing character dot patterns with "dot pattern modifiers." Harris asserted that those systems are an improvement over the "dot pattern modification" means disclosed in the Bakula patent. See App. 18a-19a.

As the names suggest, a "dot pattern modification" or a "dot pattern modifier" alters the "pattern" of dots that would ordinarily appear as characters. Dot pattern modifications include horizontal strike-throughs, cross-hatching, diagonal strikes, underlining and accents (such as the Spanish tilde "~"). See App. 16a, 18a-19a, 24a-25a. Thus, for example, the character "0" can be struck through by a line of dots so that it is displayed as "θ", as depicted in the earlier Bakula patent, Sanyo Exh. 10, in which Fig. 21a illustrates a character "dot pattern," Fig. 21b illustrates the "dot pattern modification" and Fig. 21c illustrates the resulting, modified character, as reproduced below:

FIG.21a

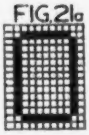


FIG.21b

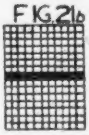
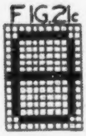


FIG.21c



3. Petitioner Sanyo Manufacturing Corporation is a Forest City, Arkansas manufacturer of television receivers, some of which are distributed by its parent, Petitioner Sanyo North America Corporation, based in San Diego, California (collectively "Sanyo").

Independently of the Harris activity described above, during the late 1970s, Sanyo cooperated with the Public Broadcasting Service (PBS) and Texas Instruments (TI) in the development of a "closed caption" television system, intended primarily to serve the hearing impaired. See Fed. Cir. Appendix A1416-19, A4317-20. (The '064 patent does not refer to closed captions or television. Sanyo Exh. 3, Fed. Cir. Appendix A510.)

A "closed caption" is text displayable at the user's option, as distinguished from an "open caption" that is always displayed. The closed caption text is formed by the known dot pattern technique. Common users of closed captions are the hearing impaired, and patrons in a restaurant or bar where the audio volume has been deliberately reduced. See App. 2a.

By early 1980, before Harris' '064 patent was issued and its contents became known outside Harris, Sears, Roebuck & Co. had advertised and had begun selling closed-caption decoders that were manufactured by Sanyo, using the PBS technical specifications. See Fed. Cir. A4317-20, A4441-46.

The Television Decoder Circuitry Act of 1990 directed the Federal Communications Commission (FCC) to require that most television receivers be "equipped with built-in decoder circuitry designed to display closed-captioning television transmissions." 47 U.S.C. § 303(u), reproduced at App. 75a. The FCC adopted comprehensive regulations implementing the Act, based on the earlier, voluntary PBS standards. 47 C.F.R. § 15.119(a). Thereafter, Sanyo—and all other manufacturers of television receivers sold in the United States—made receivers with decoder circuitry based on the specifications mandated by the FCC.

There was no evidence in this case of Sanyo copying Harris' patents or patented systems.

4. Starting in 1997, commission agents acting for Harris began offering non-exclusive licenses under groups of Harris patents to television manufacturers and distributors. Those agents asserted that compliance with the FCC closed caption regulations infringed the '063 and '064 patents. The Sony group entered into a non-exclusive cross-license with Harris, including the '063 and '064 patents, and over 60 other Harris video display and cell phone patents. Sony paid Harris $2,000,000. Sanyo Exh. 334. That amount was comparable to the likely cost of litigation of the '063 and '064 patents. (The 1999 Economic Survey of the American Intellectual Property Law Association

(AIPLA) reported that the median cost of a patent litigation through trial was 2.225 million dollars when 10 to 100 million dollars was at risk. *Id.* at 77. The AIPLA's 2003 Economic Survey reported that the median cost for such litigation was 2.0 million dollars when 1 to 25 million dollars was at risk. *Id.* at 22.)

5. In 1998, Harris sued Matsushita, Sanyo and Sharp companies in a single civil action in the Northern District of Texas, alleging infringement of the '063 and '064 patents by their television receivers that complied with the FCC closed caption decoder regulations.

During pretrial proceedings, the Matsushita defendants, and later the Sharp defendants, settled. Matsushita obtained a nonexclusive license from Harris (not a cross-license), including the '063 and '064 patents, and 60 other video display and cell phone patents, for a payment to Harris of $2,100,000. Sanyo Exh. 191. Sharp and Harris entered into a nonexclusive cross-license including the '063 and '064 patents, and 13 other Harris video display patents. Sharp paid Harris $1,425,000. Sanyo Exh. 193. As in the case of the Sony license, these payments approximated the cost of litigation.

Only the Sanyo defendants proceeded to trial. A third Sanyo defendant, Sanyo Video Components (USA) Corporation, was dismissed after Harris' case-in-chief, See App. 69a-70a, leaving the present petitioners to finish the trial and to appeal.

6. The district court appointed Gale R. Peterson, a patent attorney, as a Special Master and referred patent claim construction (interpretation) to him. He was briefed by the parties, held a hearing, and issued

a report and recommendation on claim construction, which the district court adopted. App. 15a *et seq.*

The only claim of the '064 patent asserted by Harris was claim 1. It claims a particular system limited to making "dot pattern modifications," which the '064 patent asserts is an improvement over the system for dot pattern modifications disclosed in the earlier Harris-owned Bakula patent. See App. 18a-19a. Claim 1 reads as follows:

> 1. A video display system for displaying dot pattern images of data characters on a display screen with dot pattern modifications to the video characteristics thereof and comprising:
>
> [A] means for providing a data stream including a plurality of coded character words each representing a dot pattern image to be displayed and at least one coded modifier word each representing one or more of a plurality of N dot pattern modifiers;
>
> [B] means responsive to each said coded character word for providing dot pattern video signals for forming the dot pattern image represented thereby,
>
> [C] means responsive to each said coded modifier word for providing dot pattern modifier video signals;
>
> [D] means for mixing said video signals to provide a combined dot pattern video signal;
>
> [E] means responsive to said combined video signals for forming a video image with said video dot pattern modifications made thereto; and

> [F] said modifier word responsive means having N different selectable modes for providing one or more of N modifiers for modifying a said character with the dot pattern modification for each said modifier being determined by said coded modifier word.

(With added reference characters to identify paragraphs, as used in the courts below, see, *e.g.*, 57a-58a, and with added emphasis)

The Special Master interpreted the terms "dot pattern modifications" (and variations thereof) as follows:

> [a] "dot pattern modification" consists of any variation from the dot pattern that would otherwise appear on the video screen if only the character as generated by the character generator ROM were displayed, but does not include dot position or dot intensity modifications.

App. 38a (emphasis added). In other words, to be a dot pattern modification, the modification must change the pattern of the dots, not some other attribute.

Paragraph [A] of claim 1 required a "means for providing a data stream including * * * at least one coded modifier word each representing one or more of a plurality of N dot pattern modifiers." Thus, the claim excluded systems without a "plurality of"—*i.e.*, at least two—"dot pattern modifiers."

7. The accused systems were the decoders within Sanyo television receivers, used for displaying closed-captioned text during television broadcasts. In accordance with the FCC rules, and the predecessor PBS specifications, Sanyo's receivers provided several at-

tributes as part of closed captioning: underlining, blink (or flash), italics (slant), and character color.

The principal dispute on this petition is whether the decoders in the Sanyo receivers have an equivalent to the "means" required by claim paragraph [A] "for providing a data stream including * * * at least one coded modifier word each representing one or more of a plurality of N dot pattern modifiers."

It is undisputed that Sanyo 's receivers generate one "dot pattern modifier": underlining. The parties agreed that the blink (or flash) and italics (slant) attributes are not "dot pattern modifiers." The parties have disagreed throughout the litigation, however, on whether a change in the color of a character qualifies as a second "dot pattern modifier," either literally or under the doctrine of equivalents. See App. 9a; 12a (Schall, C.J., dissenting).

The '064 patent does not disclose or expressly claim colored characters or color modifications of characters; however, colored characters or color modifications of characters were previously known, as shown by the Takeda patent, cited by the Examiner during prosecution of the application for the '064 patent. See Sanyo Exhs. 4A, 9 (Fed. Cir. Appendix A3702).

8. After claim construction, the parties cross-moved for partial summary judgment. The motions were referred to the Special Master, who issued a report and recommendation on September 29, 2000 (hereinafter "Master's Report," App. 51a *et seq.* Sanyo and Sharp moved for summary judgment that there was no literal or doctrine of equivalents infringement of the '064 patent. App. 52a, 56a. They argued, *inter alia*, that the all-elements rule barred finding that the color modification of entire characters in

Sanyo receivers was equivalent to the claimed dot pattern modification. See App. 58a, 62a, 64a.

The Master's Report recommended finding that Sanyo's receivers did not literally infringe the '064 patent for a different reason. App. 56a, 59a-62a, 65a The Report recommended denying Sanyo's motion with respect to the equivalents issues because of unspecified disputed issues of material fact. App. 62a-64a. The district court adopted the Master's Report and granted partial summary judgment of no literal infringement, with one clarification. App. 66a-67a.

The issues of fact, which the Master's Report said precluded summary judgment under the doctrine of equivalents, apparently were issues of interpretation. In particular, Sanyo had asserted that the all-elements rule precluded a scope of equivalents that would ignore the claim's requirement for at least two dot pattern modifiers, and that Sanyo receivers did not infringe the '064 patent either literally or by equivalents, because they do not produce the required "plurality" of dot pattern modifiers. Harris argued that the Sanyo receivers' ability to change color was the second dot pattern modifier. Sanyo explained that changing the color of a character had absolutely no effect on the pattern of the dots forming the character.

9. Harris's remaining claims against Sanyo were tried before a jury in August 2001. The jury returned a verdict in favor of Harris on both the '063 and '064 patents, and awarded Harris $7 million in damages. See App. 2a.

Defendants again raised the issues of legal limitations on equivalents in a timely motion for JMOL or a new trial. On December 26, 2001, the district court issued a one-page order denying Sanyo's motion, without opinion. App. 68a. A "Judgment Nunc Pro Tunc" was entered on January 14, 2002. App. 69a-70a.

10. Sanyo's appeal to the Federal Circuit was successful with respect to the other, '063 patent, obtaining a reversal of the verdict of infringement of that patent under the doctrine of equivalents. App. 2a, 4a-8a.

The Federal Circuit panel split with respect to infringement of the '064 patent. In less than two pages, without specifically addressing either the interpretation of the critical claim elements or the legal limitations on the scope of equivalents, the majority's nonprecedential opinion treated the issue as one for decision by a jury, based on expert testimony. It concluded that "substantial evidence" supported the jury verdict of infringement and, therefore, affirmed. App. 8a-10a.

Dissenting, Judge Schall would have found no infringement of the '064 patent, based on review of the agreed claim interpretation and the "all-elements" legal limitation on the permissible scope of equivalents. App. 12a-14a. In particular, Judge Schall would have held that there was no infringement of the '064 patent, "because the ordinary meaning of 'dot pattern modifier' requires that there be a variation in the arrangement of the dots, a change in the color of a dot would not qualify as a dot pattern modification." App. 14a. Therefore, with color change eliminated from being a "dot pattern modification," Judge Schall concluded that "Sanyo's receivers "lack a 'plurality' of 'dot pattern modifiers,' and thus cannot infringe under the doctrine of equivalents." *Id.*

Sanyo petitioned for rehearing by the panel and *en banc*. That petition was denied without comment on December 29, 2003. App. 71a.

REASONS FOR GRANTING THE WRIT

This Court created the doctrine of equivalents as a limited extension of the patent monopoly to protect patent holders against evasion of liability for infringement by insubstantial changes to a patented invention. See *Festo Corp.* v. *Shoketsu Kinzoku Kogyo Kabushiki Co.*, 535 U.S. 722, 726-27 (2002) (*Festo* VIII). "The doctrine of equivalents allows the patentee to claim those insubstantial alterations that were not captured in drafting the original patent claim but which could be created through trivial changes." *Id.* at 733.

Unbounded by statute or by direct administrative guidance of the Patent Office, the scope of permissible equivalents is determined primarily by "legal limitations" on application of the doctrine, such as prosecution history estoppel, the "all-elements" rule and prior art limitations.

This petition is being filed because both courts below failed to properly apply the all-elements legal limitation on equivalents as a matter of law, despite motions expressly raising the issue and despite the Court's specific admonition in *Warner-Jenkinson* that trial judges determine the legal limitations. 520 U.S. at 39 n.8.

Warner-Jenkinson recognized the danger that could result from unbounded use of the doctrine of equivalents and gave specific instructions on how to address this problem:

> Of course, the various legal limitations on the application of the doctrine of equivalents are to be determined by the court, either on a pretrial motion for partial summary judgment or on a motion for judgment as a matter of law at the close of the evidence and after the jury verdict. Fed. Rule Civ. Proc. 56; Fed. Rule Civ. Proc. 50. Thus, under the particular facts of a case, if prosecution history estoppel would apply or if a theory of equivalence would entirely vitiate a particular claim element, partial or complete judgment should be rendered by the court, as there would be no further *material* issue for the jury to resolve. Finally, in cases that reach the jury, a special verdict and/or interrogatories on each claim element could be very useful in facilitating review, uniformity, and possibly post verdict judgments as a matter of law. See Fed. Rule Civ. Proc. 49; Fed. Rule Civ. Proc. 50. We leave it to the Federal Circuit how best to implement procedural improvements to promote certainty, consistency, and reviewability to this area of the law.

520 U.S. at 39 n.8.

Issuance of a writ of certiorari would permit the Court to resolve the conflict in procedures for application of the all-elements rule and to provide badly needed guidance for application of that rule, similar to the prosecution history estoppel guidance provided in *Festo.* Such guidance would promote certainty, consistency and reviewability that is missing today.

Now is the time and this is the case in which to clarify application of the all-elements rule. In most cases, misapplication of the rule is particularly difficult to review. In this case however, that difficulty is eased by the existence of conflicting majority and dissenting opinions—illustrating the two schools of thought in the Federal Circuit—on the same facts. Also the issues in this case are relatively simple and "clean," as explained in section III.C, at 28-30, *infra*.

I. The Repeated Failure of the Courts Below to Apply the All-Elements Rule Conflicts with *Warner-Jenkinson*

Warner-Jenkinson emphasized the need for compliance with the "all-elements" rule, although it did not refer to the rule by that name. Rather, as further discussed in section I.E., *infra, Warner-Jenkinson* advised that meaning must be preserved for every claim element and that a theory of equivalence should not vitiate a claim element. *See* 520 U.S. at 29, 39 n.8, 40-41.

In the present case, the courts below erred by not determining that limitation on the application of the doctrine of equivalents as a matter of law, either on the pretrial motion for partial summary judgment, or on the motion for judgment as a matter of law, or on appellate review, contrary to this Court's directive in *Warner-Jenkinson.* See, esp., 520 U.S. at 39 n.8.

The following sections I.A – I.H address the development and role of the all-elements rule, and its misapplication in this case.

A. Patent Claims Define the Scope of the Patent Grant

Markman v. *Westview Instruments, Inc.*, 517 U.S. 370 (1996), summarized the role of claims in defining the scope of the patent grant, pointing out the requirement (in 35 U.S.C. § 112, ¶ 2, reproduced at App. 73a) that a patent must include "one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention." 517 U.S. at 373-374.

The patent claims are the result of the give-and-take between applicant and the examiner during prosecution of the patent application. *See Litton Systems, Inc.* v. *Honeywell, Inc.*, 145 F.3d 1472, 1479 (Fed. Cir. 1998) (Newman, C.J.) (views on denial of rehearing *en banc*). Primary focal points of patent examination are to assure compliance with section 112, including its "distinctly claiming" requirement, and comparing the claims with prior art, to determine whether the claimed inventions are new and unobvious. See generally, 35 U.S.C. §§ 111, 113, 132(a); Herbert F. Schwartz, PATENT LAW AND PRACTICE, 14-16, 18-27, 88-108 (4th ed. 2003). Extensive rules, in 37 C.F.R. § 1.102 *et seq.*, and the Manual of Patent Examining Procedure (MPEP) govern the claim examination process.

B. Judges Interpret the Patent Claims

Properly interpreted claims are the starting point for determining whether or not there has been infringement, including application of the doctrine of equivalents.

Prior to this Court's *Markman* decision, there was a strongly held view by some Federal Circuit judges that juries should decide all factual issues concerning infringement, including interpretation of the patent claim as an issue of fact, with the help of expert testimony. In accordance with that procedure, all issues of infringement were presented to the jury, along with instructions. Review on JMOL and appeal was limited to determining whether there was substantial evidence to support the verdict or error in jury instructions. See *Markman*, 52 F.3d at 991-92 (Mayer, C.J., concurring); *id.* at 1004, 1007-10, 1020-21, 1026 (Newman, C.J., dissenting).

Markman rejected a key part of that procedure, unequivocally holding that "the construction of a patent, including terms of art within its claims, is exclusively within the province of the court," 517 U.S. at 372, and concluded that "interpretation ... is an issue for the judge, not the jury...." *Id.* at 391. If a jury has been demanded, its role in infringement determinations is limited to fact finding in the second step of determining whether the correctly construed claim has been infringed. See *id.* at 384; *Warner-Jenkinson*, 520 U.S. at 38-39.

C. The Doctrine of Equivalents — Enforcement Beyond the Patent Grant

In the mid-19th century, the Court recognized the need for a degree of flexibility in the scope of enforcement of patents, permitting expansion of that scope beyond the literal scope of the patent claims by creation of the doctrine of equivalents. Under that doctrine, "a product or process that does not literally infringe upon the express terms of a patent claim may nonetheless be found to infringe if there is 'equivalence' between the elements of the accused product or process and the claimed elements of the patented invention." *Warner-Jenkinson*, 520 U.S. at 21, citing *Graver Tank & Mfg. Co.* v. *Linde Air Prods. Co.*, 339 U.S. 605, 609 (1950). The doctrine is limited, however, to protecting against only "unimportant and insubstantial changes" to a patented process or device. *Graver Tank*, 339 U.S. at 607. See *Festo* VIII, 535 U.S. at 726-27 (2002) (referring to "insubstantial alterations" and "trivial changes," and citing *Warner-Jenkinson*). See also *Festo* VIII, 535 U.S. at 732-33.

D. *Warner - Jenkinson* Acknowledged Legal Limitations on the Permissible Scope of Equivalents

Determination of whether there is infringement under the doctrine of equivalents is a difficult task. By definition, asserted equivalents are outside the literal scope of the patent claims granted by the Patent Office. No examiner has compared the asserted scope with the prior art, or considered whether that scope particularly points out and distinctly claims a patentable invention, or compared that scope with what the patent holder gave up in the course of obtaining the patent. As a result, the permissible scope of equivalents lacks a positive definition.

The outer limits on the permissible scope of equivalents are provided by several legal limitations. They include prosecution history estoppel, the all-elements rule and prior art limitations, all of which were endorsed in *Warner-Jenkinson.* See, *e.g.*, 520 U.S. at 39 n.8.

The prosecution history estoppel limitation has received the most attention. It was discussed in *Warner-Jenkinson,* 520 U.S. at 30-34, 40-41, and clarified in *Festo* VIII, after the Court found that the Federal Circuit had "ignored the guidance of *Warner-Jenkinson.*" *Festo* VIII, 535 U.S. at 739.

As a practical matter, however, prosecution history is a guide to the permissible scope of equivalents only when the claims have been amended or the applicant has made arguments to obtain their allowance. When a patent application attorney has initially filed carefully crafted claims, avoiding prior art and indistinctness problems, there may be no rejection by the Patent Office examiner and no amendment or argument in the prosecution history to create an estoppel. In that way, the patent holder may obtain a claim of the same scope as one that another attorney might have obtained by amendment or argument. In such cases, the all-elements legal limitation is likely to play a particularly important role in determining the permissible scope of equivalents.

E. The All-Elements Rule as Endorsed in *Warner-Jenkinson*

Warner-Jenkinson did not refer to the all-elements rule by that name or its alternative name, the all-limitations rule.[1] Rather, *Warner-Jenkinson* held that "[t]he determination of equivalence should be applied as an objective inquiry on an element-by-element basis" and then stated that equivalence would be barred "if a theory of equivalence would entirely vitiate a particular claim element." 520 U.S. at 29. The Court said, "It is important to ensure that the application of the doctrine, even as to an individual element, is not allowed such broad play as to effectively eliminate that element in its entirety." *Id.* *Warner-Jenkinson* also encouraged a "special vigilance against allowing the concept of equivalence to eliminate completely any [claim] elements...." *Id.* at 40. See *id.* at 39 n.8.

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[1] See *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 234 F.3d 558, 563 n.1 (Fed. Cir. 2000) (*en banc*) (*Festo* VI), regarding use of the terms "element" and "limitation" with respect to words in a claim or an accused device.

Federal Circuit opinions explaining and illustrating the all-elements rule include: *Pennwalt Corp.* v. *Durand-Wayland, Inc.*, 833 F.2d 931, 935-36 (Fed. Cir. 1987) (*en banc*); *Kustom Signals, Inc.* v. *Applied Concepts, Inc.*, 264 F.3d 1326, 1333 (Fed. Cir. 2001) (stating that under the "all elements" rule, there can be no infringement under the doctrine of equivalents if even one limitation of a claim or its equivalent is not present in the accused device or method); *SciMed Life Sys., Inc.* v. *Advanced Cardiovascular Sys., Inc.*, 242 F.3d 1337, 1346 (Fed. Cir. 2001) (the all-elements rule precludes the doctrine of equivalents from being "employed in a manner that wholly vitiates a claim limitation"); *Ethicon Endo-Surgery, Ins.* v. *U.S. Surgical Corp.*, 149 F.3d 1309, 1316-21 (Fed. Cir. 1998).

F. ***Warner-Jenkinson*** Directed That the Courts Apply the All-Elements Rule as a Matter of Law

The modern all-elements rule rests on the shoulders of *Markman.* The rule is akin to patent claim interpretation in that it involves interpretation of words and phrases of a claim.

Markman did not specifically address the role of judges in determining whether or not a patent claim has been infringed under the doctrine of equivalents; however, it established two important principles pertinent to application of the all-elements rule: (1) judges, not juries, are better suited to interpret the terminology in patent claims, 517 U.S. at 388-389, and (2) the Seventh Amendment does not preclude judges from making factual determinations necessary to their interpretation of patent claims, *id.* at 376-85.

Before *Warner-Jenkinson*, the doctrine of equivalents "touchstone" for a majority of Federal Circuit judges had been "whether substantial differences exist between the accused process and the patented process." See *Warner-Jenkinson*, 520 U.S. at 23; *Hilton-Davis Chem. Co.* v. *Warner-Jenkinson Co.*, 62 F.3d 1512, 1521-22 (Fed. Cir. 1995), *rev'd sub. nom. Warner-Jenkinson Co.* v. *Hilton Davis Chem. Co.*, 520 U.S. 17 (1997). The Federal Circuit *per curiam* majority opinion in that case had held that "infringement under the doctrine of equivalents is an issue of fact to be submitted to the jury in a jury trial with proper instructions," and that the Federal Circuit review should be based on a "substantial evidence" standard. *Hilton Davis*, 62 F.3d at 1522. That approach was analogous to the literal infringement procedure the Court rejected in *Markman*. See section I.B., *supra*. Similarly, *Warner-Jenkinson* rejected that approach in connection with the doctrine of equivalents when it directed that the court (judge) determine the legal limitations on the doctrine of equivalents. Specifically, note 8 of *Warner-Jenkinson* stated:

> Of course, the various legal limitations on the application of the doctrine of equivalents are to be determined by the court, either on a pretrial motion for partial summary judgment, or on a motion for judgment as a matter of law at the close of the evidence and after the jury verdict.

520 U.S. at 39 n.8. That note left to the Federal Circuit "how best to implement procedural improvements to

promote certainty, consistency, and reviewability to this area of the law."

G. The District Court Failed to Apply the All-Elements Limitation as a Matter of Law

The present case provides repeated, clear examples of failure to apply the all-elements rule in accordance with *Warner-Jenkinson* note 8. At issue is the question of whether Sanyo's accused receivers have the means of claim limitation [A][2] or an equivalent. In particular, the primary issue is whether a character color modifier qualifies as one of the "plurality of N dot pattern modifiers" required by that limitation, either literally or under the doctrine of equivalents. In either case, the determination is primarily a linguistic one of a type which judges are better qualified to make than juries, and which *Markman* and *Warner-Jenkinson* have allocated to judges.

At the summary judgment stage, the Master's Report (adopted by the district court) refused to complete an all-elements rule analysis, perhaps because the Master incorrectly believed that there was at least one underlying factual issue of interpretation, reserved for a jury. See App. 64a

At trial, the district court permitted argument and expert testimony to the jury about what the "dot pattern modification" limitations in the claim meant. See

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[2] "means for providing a data stream including a plurality of coded character words each representing a dot pattern image to be displayed and at least one coded modifier word each representing one or more of a plurality of N dot pattern modifiers;" See p. 7, *supra*.

App. 10a. As a result, the patent claim interpretation improperly became like manipulation of the notorious "nose of wax," being pushed first one way and then another.[3] The all-elements rule instruction must have made little impression in contrast to the competing barrage of attorney argument and expert testimony. After trial, the district court did not provide an opinion on Sanyo's motion for JMOL or a new trial. App. 68a. The district court never ruled as a matter of law on the permissible scope of equivalents under the all-elements rule.

H. The Federal Circuit Failed to Review Application of the All-Elements Rule *de Novo*

Because *Markman* and *Warner-Jenkinson* held that the important legal issues of claim scope, literal and under the doctrine of equivalents, should be decided by the courts, not by juries; the trial court's decisions on those legal issues are subject to *de novo* review, not deferential review under a "substantial evidence" standard. *Cf. Markman,* 52 F.3d at 979-81 (claim construction is reviewed *de* novo because it is a matter of law). However, as the majority opinion in this case reveals, some Federal Circuit judges continue to apply the jury verdict and "substantial evidence" review approach, without correction by other Federal Circuit judges. (Rehearing *en banc* was denied. App. 71a.)

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[3] "Some persons seem to suppose that a claim in a patent is like a nose of wax, which may be turned and twisted in any direction, by merely referring to the specification, so as to make it include something more than, or something different from, what its words express. . . . The claim is a statutory requirement, prescribed for the very purpose of making the patentee define precisely what his invention is; and it is unjust to the public, as well as an evasion of the law, to construe it in a manner different from the plain import of its terms. This has been so often expressed in the opinions of this court that it is unnecessary to pursue the subject further." *White* v. *Dunbar,* 119 U.S. 47, 51-52 (1886).

The Federal Circuit majority opinion devotes less than two pages to affirming the verdict of infringement of the '064 patent. Its conclusion was merely that "The necessary jury finding that change of color is a dot pattern modification is supported by substantial evidence, and is not incorrect as a matter of law." App. 10a. The majority did not explain the basis for its applying a "substantial evidence" review, without *de novo* review of the construction of the claim language and of the legal limitations on the application of the doctrine of equivalents, as suggested in *Warner-Jenkinson* note 8. The treatment of the verdict as a finding that a change of color of a character "is" a dot pattern modification indicates that majority deferred to the jury in interpreting the claim language, a role that *Markman* reserved to judges.

In contrast, Judge Schall's dissent presented an analysis of the '064 patent issue, in terms of *de novo* judicial claim interpretation and application of the all-elements rule that is in accord with *Markman* and *Warner-Jenkinson*. App. 12a-14a.

The Federal Circuit majority's decision squarely conflicts with the Court's determination in *Markman* that the court, not the jury, is the decision maker "in the better position to ascertain whether an expert's proposed definition fully comports with the specification and claims." 517 U.S. at 389. By effectively relegating the core dispute over the scope of equivalents to the jury, the majority also clearly transgressed the all-elements rule, as interpreted by *Warner Jenkinson.* 520 U.S. at 39 n.8.

II. Policy Reasons for Granting Review of This Important Issue of Federal Law

A. Policy Underlying the All-Elements Legal Limitation

For over 100 years, patent claims have been required to particularly point out and distinctly claim the patented subject matter. As the Court said in *Merrill* v. *Yeomans*, 94 U.S. 568 (1877), "[N]othing can be more just and fair, both to the patent holder and to the public, than that the former should understand, and correctly describe, just what he has invented and for what he claims a patent." *Id.* at 573-74. See 35 U.S.C. § 112, ¶ 2; *White* v. *Dunbar*, 119 U.S. 47, 51-52 (1886) (quoted in n.3, *supra*); *Keystone Bridge Co.* v. *Phoenix Iron Co.*, 95 U.S. 274, 278 (1877).

If judges do not regularly interpret the literal scope of patent claims and the legal limitations on the permissible scope of equivalents, the statutory requirement in 35 U.S.C. § 112, ¶ 2 that patent applicants "particularly point out and distinctly claim the patented invention," may be deprived of meaning. Permitting a jury to determine the literal scope and the legal limitation on the scope of equivalents of a patent claim is not only violative of the policy that judges are better suited to interpret patent claims and legal limitations on the scope of equivalents, set down by the Court in *Markman* and *Warner-Jenkinson*, but also does not promote certainty, consistency, and reviewability in this area of the law. See *Warner-Jenkinson*, 520 U.S. at 39 n.8.

Patent holders and their competitors alike need predictability. That is substantially reduced in several respects if there is a possibility that a jury will decide the enforceable scope of a claim. The jury is less skilled in interpretation of claim elements than judges. See *Markman*, 517 U.S. at 388-89. If the jury is to determine claim meaning and the permissible scope of equivalents, the outcome of a patent dispute is less predictable by the parties and their attorneys. Pretrial dispositions are less likely if trial judges mistakenly treat the permissible scope of equivalents as a "fact" issue, to be decided by a jury. Also, a jury verdict is less reviewable than a judge's findings of fact and conclusions of law, and entitled to more deference.[4]

The practice of letting the jury determine the permissible scope of equivalents also increases the likelihood of patent assertion with the principal object of obtaining settlements at less than the cost of litigation, by instilling fear of an unreviewable jury error. This is a matter of particular concern because of the high cost of patent litigation. See Statement, sections 4-5 at 5-6, *supra*. The costs of such litigation are ultimately borne by the public in its roles as customers, employees and shareholders.

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[4] *Warner-Jenkinson*, 520 U.S. at 39 n.8, recognized concern over "unreviewability due to black-box jury verdicts" in doctrine of equivalents cases. See, *Hilton-Davis*, 62 F.3d at 1538 (Plager, C.J., dissenting).

B. Procedural Treatment of Known and Foreseeable Equivalents

In the *Festo* opinions[5] and their progeny, this Court and the Federal Circuit have given detailed attention to procedural improvements in connection with only one of the legal limitations on the permissible scope of equivalents, prosecution history estoppel. Further guidance by the Court, analogous to that provided in *Festo*, is needed regarding the proper application of the all-elements legal limitation in determining the permissible scope of equivalents.

Festo stated the principle that "The patentee, as author of the claim language, may be expected to draft claims encompassing readily known equivalents." 535 U.S. at 740. See *SciMed*, 242 F.3d at 1347; *Sage Prods., Inc.* v. *Devon Indus., Inc.* 126 F.3d 1420, 1425 (Fed. Cir. 1997).

As that principle is applied in the case of prosecution history estoppel, the patent holder may be able to overcome a presumption that it gave up a particular equivalent through amendment or argument, by showing (1) that the equivalent was unforeseeable at the time of the application, or (2) that the rationale for amendment was tangential to the equivalent in question, or (3) that "the patentee could not reasonably have been expected to have described the insubstantial substitute in question." *Festo*, 535 U.S. at 740-41.

The same principle, that the patentee "may be expected to draft claims encompassing readily known equivalents," should be applied to the all-elements rule. It should be the patentee's burden to show that the asserted equivalent was unforeseeable at the time of the application, or that the patentee could not reasonably have been expected to have described the insubstantial substitute in question. That policy would be consistent with *Festo, supra, Pennwalt,* 833 F.2d at 938, and *Sage,* in which the Federal Circuit noted that "[n]o subtlety of language or complexity of technology, nor any subsequent change in the state of the art, such as later-developed technology, obfuscated the significance of the limitation at the time of its incorporation into the claim." 126 F.3d at 1425.

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[5] See especially, 234 F.3d 558 (Fed. Cir. 2000) (*en banc*) (*Festo* VI); *vac. & remanded* 535 U.S. 722 (2002) (*Festo* VIII); *on remand* 344 F.3d 1359 (Fed. Cir. 2003) (*en banc*) (*Festo* IX).

There is another, related, policy reason why the all-elements rule should bar inclusion of an undisclosed, foreseeable, alleged equivalent as a permissible equivalent to a claim element. 35 U.S.C. § 112, ¶ 1, reproduced at App. 73a, requires, *inter alia,* that patent applications include a written description of the invention which enables persons skilled in the art to make and use it. That disclosure is the consideration that the patent law requires from the patent holder in exchange for the limited monopoly granted by the patent. See *Bonito Boats, Inc.* v. *Thunder Craft Boats, Inc.,* 489 U.S. 141, 150-51 (1989). To permit a patent holder to assert an undisclosed, foreseeable equivalent, which would vitiate a claim element, would be contrary to the policy of 35 U.S.C. § 112, ¶ 1, and the expectation stated in *Festo* (quoted earlier in this section), that a patent holder would draft claims encompassing readily known equivalents.

In the present case, for example, the use of color modifiers was foreseeable at the time of the application. Harris could reasonably have been expected to have described color modifiers and a way to provide them in the claimed data stream if it wanted to claim that subject. Although the '064 patent and its application say nothing about character color modifiers, that type of modifier was neither unforeseeable or undescribeable at the time of filing. Color modification of video dot patterns was known, for example, from the prior art Takeda patent, cited by the Examiner of the '064 patent. Sanyo Exhs. 4A, 9 (Fed. Cir. App. A 3702). As the Master pointed out, however, the '064 patent disclosed several types of character attribute modifiers, but only claimed dot pattern modifiers. App. 24a-26a, 34a-38a. The claiming in the '064 patent of only systems for dot pattern modification was an intentional limitation of the claim scope at the time of filing the application, analogous to limitation of claim scope by amendment.

C. This Is the Appropriate Time and Case for Addressing the Policy Issues

This case presents both a direct conflict with *Warner-Jenkinson's* direction that the district courts determine the legal limitation on application of the doctrine of equivalents, 520 U.S. at 39 n.8, and presents important issues of federal law that have not been, but should be, settled by the Court. Both are recognized grounds for grant of review by writ of certiorari. See S.Ct. Rule 10(c).

Over six years have passed since *Warner-Jenkinson,* yet—as this case shows—some Federal Circuit judges continue to permit the old practice of letting juries decide questions of patent claim scope, including the permissible scope of equivalents under the all-elements rule, and fail to review those issues *de novo.* The Court of Appeals for the Federal Circuit collectively has permitted this practice to continue. For example, rehearing *en banc* was denied in this case. App. 71a. Although application of the all-elements rule was an issue in *Festo*, that issue was set aside by the Federal Circuit following the Court's first remand. *Festo* VI, 234 F.3d at 563-64. The Federal Circuit has not adopted "procedural improvements to promote certainty, consistency, and reviewability to this area of the law," as directed in *Warner-Jenkinson.* 520 U.S. 39 n.8.

Because of the difficulty of review of black box jury verdicts and the long-standing tolerance of the Federal Circuit for divided views on the subject, procedural guidelines for application of the all-elements limitation are not likely to be developed through precedential opinions of the Federal Circuit or inter-circuit conflicts. A widely distributed commentary predicts, with respect to the all-elements rule: "Further action by the Supreme Court seems almost inevitable." Jerry A. Riedinger, "The Future of the Doctrine of Equivalents," American Bar Association Section of Intellectual Property Law, IPL NEWSLETTER, Vol. 21, no. 1, p. 6 (Fall 2002). See *id.* at 1. Therefore, the question is not whether review should be granted on this subject, but when and in what case.

This case probably presents the facts and issues as well as any jury case could, through the detailed Special Master's reports, App. 15a *et seq.* and 51a *et seq.*, the trial record, the majority opinion and the dissent by Judge Schall. The two opinions uniquely reveal the conflict in approaches to legal limitations within the Federal Circuit, in a way that opinions from different cases would not. Also, Judge Schall's dissent illustrates the link between the all-elements rule and patent claim interpretation.

Finally, the issues in this case are relatively simple and "clean":

a. The principal issue is understandable: whether a system with a character color modifier and a dot pattern modifier is equivalent to a system with a "plurality of dot pattern modifiers,"

b. There is no issue of copying by Sanyo, and

c. The all-elements rule issue is "pure," because it is not mixed with an issue of prosecution history estoppel.

It is likely to be a long time before a writ of certiorari is sought in another case that is as suitable for review.

CONCLUSION

The petition should be granted and a writ of certiorari should be issued.

March 29, 2004

Respectfully Submitted,

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NOTE: Pursuant to Fed. Cir. R. 47.6, this disposition is not citable as precedent. It is a public record. This disposition will appear in tables published periodically.

02-1210, -1211

UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT

HARRIS CORPORATION,
Plaintiff-Cross Appellant,

v.

SANYO NORTH AMERICA,
SANYO MANUFACTURING CORPORATION,
and SANYO VIDEO COMPONENTS (USA)
CORPORATION,
Defendants-Appellants.

DECIDED: October 29, 2003

Before NEWMAN, LOURIE, and SCHALL, *Circuit Judges.*

Opinion for the court filed by *Circuit Judge* NEWMAN. Concurring in part and dissenting in part opinion filed by *Circuit Judge* SCHALL.

NEWMAN, *Circuit Judge.*

Sanyo North America, Sanyo Manufacturing Corp., and Sanyo Video Components (USA) Corp. (together "Sanyo") appeal the judgment of the United States District Court for the Northern District of Texas, entering judgment upon a jury verdict that Sanyo infringed United States Patents No. 4,290,063 (the '063 patent) and No. 4,290,064 (the '064 patent) under the doctrine of equivalents, that the patents were not invalid, and awarding $7,000,000 in damages.[1] The patents are owned by Harris Corporation, and relate to video display systems and methods of encoding text for video display, such as are used in closed captioning for television.

We affirm the verdicts of validity, affirm the verdict of infringement of the '064 patent, and reverse the verdict of infringement of the '063 patent. No challenge was raised to the jury's assessment of damages. The final judgment is *affirmed.*

BACKGROUND

Closed captioning for television display superimposes upon the video screen a text version of the audible speech and sounds, to make them visibly accessible to viewers who cannot hear the audio broadcast, such as the hearing impaired or restaurant and bar patrons where the audio volume is deliberately reduced.

In closed captioning, the code for the caption is transmitted via the video signal during the interval between scans of the picture tube. The transmissions occur during the brief periods when the electron beam is switched off while it is repositioned for the next scan. The data arrive in packets of zeros and ones, as in all digital communications. The patents in suit relate to systems whereby these data packets are transformed into patterns of letters, numbers, and symbols for the captions, and positioned on the television screen.

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[1] *Harris Corp. v. Sanyo North America Corp.,* No. 98-CV-2712 (N.D. Tex. Dec. 26, 2001)

There are three principal categories of data in a closed captioning system: characters (the letters, symbols and numbers corresponding to the sounds being broadcast), attributes (such as italics or underlining), and commands (such as a signal to start a new line). At the time of the invention in suit, the data were normally transmitted in eight-bit binary words. When all of the bits of such words are used to represent letters or numbers, an eight-bit word can represent any of 2^8=256 values, more than enough to represent the letters, numbers, and symbols needed for closed captioning.

The '063 and '064 patents are directed to systems wherein one of the bits in each eight-bit binary word is used to indicate whether the following bits represent a character or an attribute or a command, for example by assigning to the first bit the number one if what follows is a character, and zero if what follows is either an attribute or a command. However, when one of the bits in the eight-bit binary word is dedicated to identifying what follows as a character, that leaves only a seven-bit word available for representing characters. Since a seven-bit word has only. 2^7=128 possible values, the word can represent substantially fewer possible letters, numbers, and symbols than an eight-bit word.

The system of the '063 and '064 patents assigns more characters than would normally be possible if one or more bits were dedicated to distinguishing between characters and non-characters, with only the remaining bits used to express characters. In this way the capacity of the eight-bit system is partially restored. The '063 patent is directed to a system for displaying video text, and the '064 patent is directed to a system for modifying the appearance of characters on video displays.

THE '063 PATENT

The '063 patent is entitled "Video display terminal having means for altering data words." As described therein, at least one of the bits in the data word is dedicated to indicating whether the rest of the word represents a character or a non-character. A "character generator means" converts the data into signals that display the represented character on the screen or perform the non-character tasks assigned. In order to increase the number of possible data words available for representing characters, a "conversion means" is inserted before the character generator means, which converts into additional characters some of the possible data words that would normally represent non-characters.

Claim 1 of the '063 patent follows:

> 1. A video display system, comprising:
>
> a data source for providing a data stream comprised of a plurality of multi-bit coded data words, each said data word being comprised of N bits and having at least one dedicated bit position for normally indicating whether the data

> word is representative of a character to be displayed or a non-character, whereby a maximum of N-1 bits can be used to provide character information;
>
> video display means for displaying images of characters represented by character data words;
>
> character generator means for receiving said data words for controlling said video display means in dependence upon non-character data words for displaying images of said character data words; and
>
> conversion means interposed between said data source and said character generator means for converting the bit patterns of at least some of said data words normally representing said non-character data words into that representing character data words to thereby increase the number of said data words available to represent characters to be displayed.

In the preferred embodiment, a programmable logic array is the "conversion means" to reassign to characters some of the words that would normally be identified as commands or attributes. This embodiment provides circuitry that essentially overrides the bit that makes the character/non-character distinction, whereby words that are normally reserved for non-characters are used to represent additional characters.

The accused Sanyo system does not use eight-bit data words, but sixteen-bit words. The sixteen-bit words contain two parity bits - essentially error correction devices not relevant to the infringement analysis - and fourteen bits for data. They thus can display 2^{14}=16,284 characters and other commands. Instead of using one bit or a series of bits to identify whether the data correspond to a character, the accused system assigns some values of the words to specific characters or pairs of characters and other values to attributes and commands. The accused format is required by FCC regulations.

The district court appointed a Special Master, who construed the claims, in accordance with *Markman v. Westview Instruments. Inc.*, 52 F.3d 967, 976, 34 USPQ2d 1321,1326 (Fed. Cir. 1995) (*en banc*), *aff'd*, 517 U.S. 370 (1996). At issue is the claim clause "at least one dedicated bit position for normally indicating whether the data word is representative of a character to be displayed or a non-character." The district court, adopting the Special Master's construction, construed this limitation as follows:

> "Dedicated bit position" . . . means one or more bit positions in the multi-bit coded data words in the data stream provided by the data source that indicate whether the data word is representative of a character or a non-character, and that bit position is not used to provide character information.

Neither side challenges this construction. It requires that any bit position that is a candidate for the dedicated bit position limitation must be devoted entirely to identifying the other data bits as either characters or non-characters, and the information specifying which character or non-character is being represented must lie entirely within the remaining bits. Sanyo argued that this limitation is not literally present in its method, and the district court agreed, holding that on this claim construction literal infringement could not be found.

Sanyo further argued that the absence of this step also avoids infringement under the doctrine of equivalents, since this claim limitation is missing in its entirety. *See Warner Jenkinson Co. v. Hilton Davis Chemical Co.*, 520 U.S. 17, 29, 41 USPQ2d 1865, 1871 (1997) (It is important to ensure that the application of the doctrine, even as to an individual element, is not allowed such broad play as to effectively eliminate that element in its entirety.") The district court held that there was insufficient evidence or undisputed facts upon which to decide this question, which was then tried to a jury. The jury was instructed, *inter alia*, as to the all-elements rule, and found that the claims were infringed under the doctrine of equivalents.

Harris argues that the jury verdict is supported by substantial evidence. Harris states that in the Sanyo system the words identifying non-characters are all grouped together, and hence have their first three data bits within the same range. Thus, Harris states, these first three bits identify what follows as either a character or a non-character, depending on their values. Harris concludes that the "dedicated bit position" is met, at least under the doctrine of equivalents.

However, under the court's claim construction, which is unchallenged. Harris' argument that the first three bits meet the dedicated bit position limitation, literally or equivalently, is not supported by substantial evidence. *See Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1235, 9 USPQ2d 1913, 1919 (Fed. Cir. 1989) (ascertaining whether there was substantial evidence in support of the jury verdict). When each of these bits is within the non-character range, these first three bits also contain information about what non-character is being expressed. Similarly, when a character is being expressed, these first three bits are also partially used to specify what character is being expressed. Thus there is no bit that flags whether or not what follows is a character. Consequently nothing in the Sanyo method corresponds to or serves the functions of "at least one dedicated bit position for normally indicating whether the data word is representative of a character to be displayed or a non-character."

Since this claim element and equivalents thereof is missing in its entirety, there cannot be infringement under the doctrine of equivalents, as a matter of law. Consequently, the verdict cannot stand, for a material element of the claimed invention is entirely missing, both literally and by an equivalent, from the accused system.

THE '064 PATENT

The '064 patent is entitled "Video display of images with improved video enhancements thereto," and is directed to a system for modifying the appearance of characters on video displays. Typical modifications include underlining the character, changing it to italics, changing its color, and changing its intensity.

Television displays are composed of a series of dots or pixels, which are selectively illuminated to form the video display. The characters in a closed caption display can be viewed as a pattern of dots which, when seen from a normal viewing distance, look like a printed word. Some of the character modifications at issue change the pattern of the dots displayed on the screen, for example by underlining, and some change the character in other ways, such as by changing the intensity of the dots. Sanyo does not dispute that its system contains all of the elements of claim 1, except for the following clause:

> means for providing a data stream including . . . at least one coded modifier word each representing one or more of a plurality of N dot pattern modifiers.

Sanyo states that its system performs only one modification that qualifies as a modification of the dot pattern, and that there is not a "plurality of N dot pattern modifiers" as required by this clause. Sanyo states that this claim limitation is "missing in its entirety," and thus that it is not subject to infringement under the doctrine of equivalents.

One of the dot pattern modifications available in the accused Sanyo system is underlining. The parties agree that underlining is a dot pattern modification, since underlining is accomplished by adding a row of dots to the bottom of the pattern of dots that forms the letter on the screen. They disputed at trial whether there is a second, and hence a plurality, of dot pattern modifications. Harris argued, and its expert witness testified, that the second dot pattern modification is a change in the color of the character. Sanyo argued, and its expert witness testified, that changing the color is not a modification of the dot pattern, or an equivalent thereof.

The specification does not define "dot pattern modification," but gives examples of what is excluded from the category, listing "dot position" and "dot intensity" as modifications that are not to the dot pattern, but not mentioning change of color. Harris' position is that a change of color is more akin to underlining (an admitted dot pattern modification) than to a change in intensity, which does not modify the dot pattern. Experts testified as to each position, each presenting logical and credible explanations. The necessary jury finding that change of color is a dot pattern modification was supported by substantial evidence, and is not incorrect as a matter of law. As to this issue, the jury verdict of infringement of the '064 patent under the doctrine of equivalents must be sustained.[2]

VALIDITY

Sanyo argued that a closed captioning system "essentially the same" as the one it uses was jointly developed and tested by the Public Broadcasting System and Texas Instruments (the PBS/TI system) and was the subject of a contract for sale between PBS and TI, more than a year before the applications were filed for the patents in suit. This issue was tried to the jury.

The Harris position was that the PBS/TI system is not the same as that of the '063 and '064 patents, and in any event is not prior art because the system was developed privately and was neither used nor disclosed. Harris also argued that the contract between PBS and

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[2] Although Sanyo refers to this court's now-vacated decision in *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 234 F.3d 558, 56 USPQ2d 1865 (Fed. Cir. 2000), application of the Supreme Court's ensuing decision, 535 U.S. 722, 62 USPQ2d 1705 (2002), shows that this claim element was not amended during prosecution and no prosecution history estoppel arose as to equivalent subject matter.

TI was not a sales contract but a joint development contract. Sanyo disputed that the PBS/TI system could be deemed abandoned, suppressed, or concealed, for it was later sold to Sears.

Before the jury there was extensive evidence concerning the nature of the PBS/TI activity, the relationship between PBS and TI, and whether the system offered to Sears was the same as the invention in the patents in suit. Sanyo has not met its burden of showing that no reasonable jury could have found that invalidity on on-sale grounds was not proven. The verdict of validity is affirmed.

SCHALL, *Circuit Judge*, concurring in part, dissenting in part.

I join the majority's well reasoned analysis with respect to the issues of infringement of the '063 patent and the validity of both the '063 and the '064 patents. However, I respectfully dissent from the part of the majority's opinion that affirms the district court's denial of Sanyo's motion for JMOL of non-infringement of the '064 patent under the doctrine of equivalents. In my view, because Sanyo's receivers do not generate a "plurality" of "dot pattern modifiers," as required by the claim at issue, the district court erred by not granting Sanyo's motion for JMOL.

It is undisputed that Sanyo's receivers generate one dot pattern modifier: underlining. The parties disagree, though, on whether a change in the color of a dot qualifies as an additional "dot pattern modifier." In my view, it does not. The district court interpreted the phrase "dot pattern modification" and its variations (i.e., "dot pattern modifier") as "*any variation from the dot pattern* that would otherwise appear on the video screen if only the character as generated by the character generator ROM were displayed, but does not include dot position or dot intensity modifications." (emphasis added). I believe this claim construction bars a finding that changes in color are "dot pattern modifications."

As we have noted, the words used in a claim are examined from the perspective of a person skilled in the art. *Tegal Corp. v. Tokyo Electron Am., Inc.*, 257 F.3d 1331, 1342 (Fed. Cir. 2001). In the absence of an express intent to impart a novel meaning to claim terms, the words are presumed to take on the ordinary and customary meanings attributed to them by those of ordinary skill in the art. *See, e.g. Teleflex. Inc. v. Ficosa N. Am. Corp.*, 299 F.3d 1313, 1325 (Fed. Cir. 2002). The ordinary and customary meaning of a claim term may be determined by reviewing a variety of sources. *Brookhill-Wilk 1, LLC v. Intuitive Surgical, Inc.*, 334 F.3d 1294 (Fed. Cir. 2003). Some of these sources include the claim itself, *see Process Control Corp. v. HydReclaim Corp.*, 190 F.3d 1350, 1357 (Fed. Cir. 1999); dictionaries and treatises, *Tex. Digital Sys., Inc. v. Telegenix, Inc.*, 308 F.3d 1193, 1202 (Fed. Cir. 2002); and the written description, the drawings, and the prosecution history, *see, e.g., DeMarini Sports, Inc. v. Worth, Inc.*, 239 F.3d 1314, 1324 (Fed. Cir. 2001).

The dictionary defines "pattern" as "[a]n arrangement or order discernible in objects, actions, ideas, situations, etc." *2 New Shorter Oxford English Dictionary at 2126*. "Dot pattern modifiers" therefore vary the "arrangement" or "order" of the dots, a definition that quite reasonably includes functions that add or subtract dots from the dot pattern. Thus, underlining is a dot pattern modifier because it varies the arrangement of the dots --the pattern-- by adding dots beneath the characters produced by the character generator. A change in color, however, does not alter the arrangement of the dots that comprise a character.

The '064 patent's written description also supports the conclusion that a dot pattern modifier requires that the pattern (i.e., the arrangement) of the dots be modified. The written description should be examined in every case to determine if the presumption of ordinary and customary meaning is rebutted. *Brookhill-Wilk*, slip op. at 6 (citing *Renishaw PLC v. Marposs Societa' per Azioni*, 158 F.3d 1243, 1250 (Fed. Cir. 1998)). The presumption will be rebutted where the patentee, acting as his or her own lexicographer, has clearly set forth a definition of a claim term that is different from the term's ordinary and customary meaning. *Id.* at 6-7 (citing *In re Paulsen*, 30 F.3d 1475, 1480 (Fed. Cir. 1994); *Intellicall, Inc. v. Phonometrics, Inc.*, 952 F.2d 1384, 1387-88 (Fed. Cir. 1992)). It also will be rebutted if the inventor has disavowed or disclaimed scope of coverage, by using words or expressions of manifest exclusion or restriction, representing a clear disavowal of claim scope. *Id.* at 7 (citing *Teleflex*, 299 F.3d at 1324). The specification of the '064 patent does not define "dot pattern modifier" in a way that is at variance with its ordinary meaning. Nowhere in the specification does the patentee, acting as his or her own lexicographer, clearly set forth a definition of "dot pattern modifier" different from its ordinary and customary meaning.

In sum, because the ordinary meaning of "dot pattern modifier" requires that there be a variation in the arrangement of the dots, a change in the color of a dot would not qualify as a dot pattern modification. As a result, because Sanyo's receivers can only generate a single "dot pattern modifier," i.e., underlining, they lack a "plurality" of "dot pattern modifiers," and thus cannot infringe under the doctrine of equivalents. *See Kustom Signals. Inc. v. Applied Concepts. Inc.*, 264 F.3d 1326, 1333 (Fed. Cir. 2001) (stating that under the "all elements" rule, there can be no infringement under the doctrine of equivalents if even one limitation of a claim or its equivalent is not present in the accused device or method).

For the foregoing reasons, I most respectfully dissent.

THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF TEXAS
DALLAS DIVISION

HARRIS CORPORATION, v. SANYO NORTH
AMERICA CORPORATION et al.

C.A. NO. 3-98-CV-2712

Entered: January 19, 2000

SPECIAL MASTER'S FINAL REPORT AND RECOMMENDATION ON CLAIM CONSTRUCTION

Gale R. Peterson, Special Master

Harris Corporation ("Harris") asserts that the named defendants infringe claim 1 of each of the two patents-in-suit, namely U.S. Patent No. 4,290,063 (the '063' patent) and U.S. Patent No. 4,290,064 (the '064 patent) both generally directed to video display systems.

This Court's Order of May 21, 1999, directed that "[a]ll pretrial matters involving patent claim interpretation are referred to the special master for report and recommendation." In accordance with that Order, a *Markman*[1] hearing was held during October 26-27, 1999. Both parties presented testimony and exhibits said to bear on disputed issues of claim construction. A record of that hearing has been prepared and filed with the court. Having reviewed the transcript of that hearing as well as the exhibits offered by both parties, and pursuant to this Court's referral of May 21, 1999, a Special Master's Draft Report and Recommendation on Claim Construction was issued on December. 31, 1999. In accordance with the parties' agreement, the parties' comments on that draft were due ten (10) days from the date of that draft report and recommendation.

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[1] *Markman v. Westview Instruments, Inc.*, 517 U.S. 370 (1996).

All parties timely responded through letters indicating that each of the parties did not necessarily agree with all of the recommendations made in that draft report and recommendation, but that each of the parties had no further substantive arguments to advance.

Accordingly, this is the Special Master's Final Report and Recommendation on Claim Construction.

I. U.S. Patent No. 4,290,063

* * * * [omitted]

II. U.S. Patent No. 4,290,064

A. Background

The '064 patent-in-suit is generally drawn to a video display system for displaying dot pattern images of data characters on a display screen with dot pattern modifications such as horizontal strike-throughs, cross hatch, diagonal strikes and the like. Similar to the '063 patent-in-suit, the specification of the '064 patent-in-suit discloses first what is termed "a relatively conventional processor driven terminal" (Col. 5, line 5) and then describes an embodiment of the invention.

That format is useful in gaining an understanding of the invention, and will be followed here as well.

Referring to Fig. 2 of the '064 patent-in-suit:

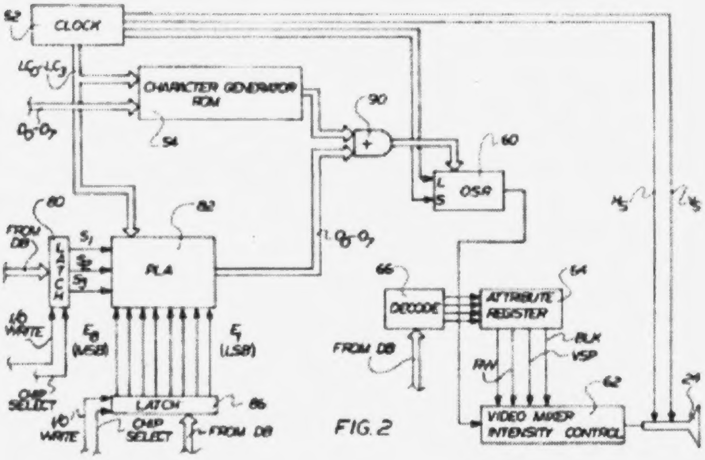

FIG. 2

read-only memory (ROM) 54 stores a font of dot patterns for various characters and symbols for display by cathode ray tube (CRT) 24. The address for addressing a dot pattern stored in memory 54, according to the patent, is the coded character D_0-D_7 and a four line coded line count LC_0-LC_3 coming from a video control and timing circuit 52. Each scan on CRT 24 lays down one "slice" or dot pattern segment for each of the characters on a line. For a 9 x 16 dot character field, therefore, sixteen scan lines would be required meaning that for each generated character, ROM 54 must be addressed at least sixteen times. According to the patent, each time a line segment dot pattern is outputted from memory 54, it appears as a bit pattern that is loaded in parallel into an output shift register 60 when that register receives a load signal from clock 52. The dot pattern outputs from output shift register 60 are routed to video mixer and intensity control 62 for

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mixing with certain attributes. That modifies the bit stream with attributes such as reverse video, character blank or video suppress. Those attributes are controlled by an attribute register 64, which in turn is controlled by an attribute code in the bit stream decoded in decoder 66. (Col. 3, line 30-Col. 5, line 3)

The foregoing description is of what the patentee refers to as "a relatively conventional processor driven terminal." (Col. 5. line 5) Under the heading "Background and Field of the Invention," the patentee explains that "[t]ypically such systems have a fixed number of video modifications or 'enhancements' that can be made and that such modifications deal with non-dot pattern modifications, such as dot position or dot intensity." (Col. 1, lines 23-27) The patentee also explains that another co-owned patent, U.S. Patent No. 4,204,207 to Bakula et al. ("the Bakula patent") discloses an improvement to such a system. The Bakula et al. improvement, as described by the '064 patentee, uses two ROMs, one for storing dot patterns to form characters and the other for storing dot patterns to provide video modifications to the characters to be displayed. Coded data words in the Bakula et al. patent, according to the '064 patentee, are used for addressing those two memories so that certain video modifications can be made for an associated character. In the Bakula et al. system, as explained by the '064 patentee, dot pattern video signals from the character memory are modified by dot pattern video signals from the modification memory by "ORing" the two outputs together. That] modified dot pattern is then used to form a video image representing the character to be displayed with the desired modifications. The '064 patentee explains, however, that in the Bakula et al. system, the number of video modifications that can be made is limited to the fixed number of dot pattern modifications stored in the modification memory. (Col. 1, lines 28-51)

In the Bakula et al. system, according to the '064 patentee, "no provisions were made to vary by program control anyone of the plurality of enhancements." Such program control, however, according to the '064 patentee, "is achieved in accordance with the present invention with circuitry as illustrated in FIG. 2 * * *." (Col. 5, lines 29-33)

In Fig. 2, according to the patentee, it is "contemplated that each character to be displayed may have its video dot pattern characteristics modified by one or more of three different video overlays S_1, S_2 or S_3'" A coded data word from data bus DB is, according to the patentee, supplied [*36] to latch 80 and will determine whether S_1, S_2 or S_3 or a combination thereof will be effected. The S_1, S_2 or S_3 outputs are supplied to a program logic array (PLA) 82 together with the four bit line count LC_0 to LC_3. According to the patent, "[i]f one or more of the video overlay outputs S_1, S_2 or S_3 is raised, then that overlay will be in effect." The meaning of the overlay, however, is dependent, according to the patent, on an eight bit programming word E_1-E_8 in latch register 86. That word is represented in Fig. 3:

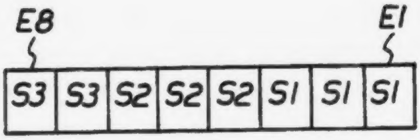

FIG.3

As illustrated, the two most significant bits are used to designate different overlays for S_3. Thus, there are 2^2 or four possible overlays. Three bit positions are used to designate S_2 and S_1, respectively, and therefore there are 2^3 or eight possible choices. Those overlays and their programming are represented in Table I in the '064 patent and include such modifications as horizontal strike throughs, highlighting, cross hatching, double underlining and so forth.

The patentee explains that the selected bit pattern will be outputted by PLA 82 (O_0) in synchronism with the line scan count LC_0 to LC_3 and O_7 Red with the bit pattern outputted from ROM 54 in OR gate 90. The bit patterns are then supplied to output shift register 60 in synchronism with a load command, and then outputted in a bit series stream to video mixer 62 for mixing with any attributes obtained from register 64. Thus, the dot pattern for the character addressed at memory 54 will have a superimposed video modification dot pattern outputted from PLA 82.

Harris asserts claim 1, which provides as follows, with the disputed terms shown in bold:

> 1. A video display system for displaying dot pattern images of data characters on a display screen with **dot pattern modifications** to the video characteristics thereof and comprising:
>
> means for providing a data stream including a plurality of coded character words each representing a dot pattern image to be displayed and at least one coded modifier word each representing one or more of a plurality of N **dot pattern modifiers**;
>
> means responsive to each said coded character word for providing dot pattern

video signals for forming the dot pattern image represented thereby,

means responsive to each said coded modifier word for providing **dot pattern modifier** video signals;

means for mixing said video signals to provide a combined dot pattern video signal;

means responsive to said combined video signals for forming a video image with said video **dot pattern modifications** made thereto; and

said modifier word responsive means having N different selectable modes for providing one or more of N modifiers for modifying a said character with the dot pattern modification for each said modifier being determined by said coded modifier word.

B. Discussion

1. "dot pattern modifiers" and "dot pattern modifications"

As reflected in the following, the dispute centers on whether the terms "dot pattern modifiers" and "dot pattern modifications," used a number of times in claim 1, include variations in dot position or dot intensity:

Harris	Joint Defendants
A "dot pattern modification" consists of any variation from the dot pattern that would otherwise appear on the video screen if only the character as generated by the character generator ROM were displayed.[10]	The phrases "dot pattern modifications" and "dot pattern modifier" are used interchangeably in Claim 1 of the '064 patent and refer to video modifications that are applied to characters by superimposing a fixed matrix of dots that form the desired modifications over the matrix of dots that form the character. Dot pattern modifications do not include modifications which change the position of dots or which change the intensity of dots.[11]

The defendants urge that their interpretation is supported by the specification of the '064 patent-in-suit, the above referenced Bakula patent (specifically a distinction drawn during the prosecution of that patent between "dot pattern modifications" and "non-dot pattern modifications") and its relationship to the '064 patent-in-suit (co-ownership and prosecuted by the same patent attorney), and the testimony of its expert witness, Dr. Rhyne. Harris counters that the specification of the '064 patent-in-suit does not support excluding modifications which change the position of dots or which change the intensity of dots, that the

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[10] Harris' Post-Hearing Brief at 8, Harris' Reply Brief at 7.

[11] Defendants' Joint Post-Hearing Brief at 42.

Bakula patent's distinction between "dot pattern modifications" and "non-dot pattern modifications" is not relevant here because the inventions of the Bakula patent and the instant '064 patent-in-suit are different, and that the testimony by Harris' expert, Dr. Mercer, support its position that "dot pattern modifications" should be construed by determining whether or not a modification is made using the structure and "methodology" of the '064 patent-in-suit.

First, the defendants argue that the '064 patent "defines dot pattern modifications as excluding modifications that are changes in either dot position or dot intensity." Defendant's Joint Post-Hearing Brief at 34. The defendants point to the specification in the '064 patent-in-suit stating:

> Typically, such systems have a fixed number of video modifications or "enhancements" that can be made and that such modifications deal with non-dot pattern modifications, such as dot position or dot intensity.

(Col. 1, lines 23-27) In context, the above quoted phrase appears after a sentence telling the reader that video display systems that have "means for displaying data characters as well as for modifying the video characteristics of the displayed characters" are part of the prior art, but no specific prior art system is referenced. (Col. 1, lines 20-23) The next following paragraph begins a brief discussion of the Bakula patent introduced by the phrase: "Improvements to such systems are represented by the (Bakula patent]." (Col. 1, lines 28-31) The discussion of the Bakula patent notes that Bakula et al. disclose a system having two

ROMs, one for storing dot patterns to form characters and one for storing dot patterns to provide video modifications to those characters. Those dot patterns in the Bakula patent are combined by ORing which, according to the description in the '064 patent, produces a modified dot pattern that is used to form the image, namely the selected character with the selected modification.

Dr. Rhyne, in his expert report, stated that typical character modifications fall into three classes, namely:

> 1. *Dot-pattern modifications* which add additional enabled dots to the dot-matrix pattern of the displayed characters, as to add a tilde (ñ) or a strike-through bar (~~M~~) to the unmodified character.
>
> 2. *Dot-position modifications* which move some of the dots relative to their normal positions on the display screen, as to slant the basic characters into true italicized format, and
>
> 3. *Dot-intensity modifications* which are used to embolden characters or to produce reverse video representations.

Rhyne Report, Hearing Exhibit 9, at 12. When asked about those three classifications, Harris' expert, Dr. Mercer testified:

> Q. (By Mr. Ebenstein) Now, Dr. Rhyne distinguishes between dot pattern modifications, dot position modifications

> and dot intensity modifications. And I think you testified that that's his opinion, but you don't take issue with that; is that correct?
> A. I think this is - is a legitimate taxonomy.
> Q. Legitimate what?
> A. I think this is a legitimate taxonomy. We might have disagreements when we start to apply it to one of the patents, but it's—there's no problem with—this is a way of communicating about things if you'd like calling them dot pattern modifications, dot position modifications and dot intensity modifications.

Hearing Transcript at 229. Dr. Mercer was then asked:

> Q. I'd like you to take a look at Column 1 [of the '064 patent], starting at Line 20, and I'm particularly interested in the last sentence which says, "Typically, such systems have a fixed number of video modifications or, quote, 'enhancements' closed quote, that can be made, and that such modifications deal with non-dot pattern modifications, such as dot position or dot intensity." Somebody clearly thought that variations in dot position or dot intensity are not dot pattern modifications for this purpose; is that fair?
> A. Yes, I think that's an appropriate interpretation.

Hearing Transcript at 230. Dr. Mercer was further asked:

> Q. (By Mr. Ebenstein) When the language talks about —
> A. "This language" being the language of the patent or the language of Dr. Rhyne?
> Q. The language of the patent.
> A. Okay.
> Q. When the language says "non-dot pattern modifications such as dot position or dot intensity," that is saying that dot pattern modifications do not include dot position or dot intensity, is that true, in this language?
> A. Yes, I think that's true.

* * * * [in original]

> [after Dr. Mercer asks that the question be repeated]
> Q. (By Mr. Ebenstein) Does this language indicate that dot pattern modifications do not include modifications to dot position and dot intensity?
> A. Yes, dot pattern modifications are different than dot position and dot intensity.

Hearing Transcript at 230-232. It thus would appear that both parries' experts are in apparent agreement that dot pattern modifications are different than dot position and dot intensity. One might gainfully ask why that does not resolve the issue. The answer, according to Dr. Mercer, is because the '064 patent is directed generally to "video" enhancements or modifications. Dr. Mercer testified:

> Q. Now, Dr. Mercer, by way of a—what I can only call a negative limitation, the defendants have asked for a claim interpretation ruling that would say that video enhancements or video modifications like bolding or italics and the like are not part of the invention as claimed in the '064 patent from a purely technical standpoint. Having studied this, do you agree or disagree?
> A. I disagree.
> Q. For the reasons that you've just stated?
> A. For the reasons I just stated I believe that video enhancements were really the very focus of this invention. Of course, the dot pattern augmentation was there as well.

Hearing Transcript at 174. The "reasons" just stated included the following that was generally in response to a question six pages earlier in the transcript, namely: "Q. Can you describe for us, please, how certain of the enhancements would be accomplished using the invention of the '064 patent, in particular bolding or highlighting?," Hearing Transcript at 163, and which was followed by several interruptions leading up to:

> The Witness: But on the other hand [as distinguished from the output of character generator ROM 54], if we look on Figure 2 [of the '064 patent] at the output

> of element 82, the PLA, you'll see that the number of lines that come out are eight lines, not seven lines. Only seven of these are required for those dot patterns that we're talking about. There exists one additional bit or one additional bit of communication not specifically toward the dot pattern, but toward video enhancements. And that's why video is not used with the output of ROM 54 in the patent, as I'll be able to show you, and not used in the claim; and that's why video is used associated with the output of PLA 82 in the patent and also in the claim. As a matter of fact, everything downstream from the PLA will have associated with it in the claim the word "video" because potentially seven of these bits are specification for dots, and another 16 of these bits, one for each of the 16 lines, has the potential of specifying video characteristics.

Hearing Transcript at 169. That question and answer was prompted by Table I of the '064 patent. Table I is said to illustrate overlays S_1, S_2 and S_3, and the programming therefore. One of the entries in that table refers to "Highlight." That entry and the use of the word "video," Harris says, make clear that the claims should not be construed to exclude variations in dot position or dot intensity. Again, Dr. Mercer testified:

> Q. (By Mr. Bunsow) You were talking about the means responsive to each said coded modifier word. I have put up that

> element, and I see the word "video." Will you explain to us what the significance of the use of the word "video" I [*sic.*] Claim 1 is as opposed to just talking about dot patterns?
> A. Yes. I believe this video here is, in fact, the video specification that we're talking about that we often call "attributes," things like blinking or highlighting or blanking, those kinds of things, those kinds of attributes.
>
> * * * * [in original]
>
> Q. Is that [use in the preamble] an important use of the word "video" in your view?
> A. To me it's a, very significant use of the word "video," and if they hadn't meant video, I don't believe they would have used "video." I believe they would have said "pixels" or "dot patterns" or something like that, but they didn't. They said "video."

Hearing Transcript at 171.

There are, however, several problems with Dr. Mercer's testimony. The specification, for example, simply refers to the output of PLA 82 as an eight bit pattern 0_0-0_7. There is no disclosure of using seven of those bits for dot patterns and one of those bits for "video enhancements." Dr. Mercer's testimony of how one may use (or modify) Fig. 2 of the '064 patent to create intensity variation plainly lacks foundation in the patent itself. Dr. Rhyne additionally testified in rebuttal that the Dr. Mercer's exemplar would not be functional.

Further, as the defendants note, Dr. Mercer assumed, apparently, that 'the reference to "highlight" in Table I was a reference to intensity variation. The '064 patent, however, does not use "highlight" anywhere other than Table I, and does not explain what was intended. Dr. Rhyne testified that there were techniques for highlighting text that could be implemented by dot pattern modification rather than by dot intensity modification. (Hearing Transcript at 363-365, 377-378) In short, the single use of the word "highlight" in Table I does not compel the conclusion that dot intensity modifications were intended to fall within the scope of claim 1.

Also, Dr. Mercer's emphasis on the patentee's use of the word "video" is misplaced. Nothing in the specification or prosecution history suggests the distinction that Dr. Mercer was drawing. Indeed, in claim 1, Dr. Mercer referred to the third element "means responsive to each said coded modifier word for providing dot pattern modifier **video** signals," and testified, as discussed above, "And that's why video is not used with the output of ROM 54 in the patent, as I'll be able to show you, and not used in the claim; and that's why video is used associated with the output of PLA 82 in the patent and also in the claim." In the preceding claim element, however, the patentee calls for "means responsive to each said coded character word for providing dot pattern **video** signals for forming the dot pattern image represented thereby," referring to the output of ROM 54.

Harris also argues that "that it is not the particular modification or enhancement that is important but rather **how it is done.**" [Emphasis in original] Harris' Post-Hearing Brief at 7. Harris amplified on that argument in its Reply Brief at 8:

> For example, if highlighting can be accomplished by combining a dot pattern modifier video signal with the pattern output from the character generator ROM, as the specification of the '064 patent indicates in Table I, then such a modification is be [sic.] covered. If highlighting is accomplished differently, such as by using a decoder and attribute register to change the combined video signal before it is output to the display means, then that type of modification should not be covered by the claim of the '064 patent. * * *

Determining infringement / non-infringement, however, is not based on what is disclosed in the specification or on a paraphrase of what one or the other of the parties believes may be the gist of the invention. Infringement, as the parties are well aware, is based first on properly construing the asserted claims, and secondly on determining, as a factual matter, whether the claim or claims as so construed cover the accused device either literally or by equivalents. How the defendants implement, for example. highlighting (if they do) will be an issue during the second step of the analysis. But this is the first step of the analysis.

Additionally, claim 1 is an apparatus claim, not a method claim. It is true, of course, that there are a number of means-plus-function elements (discussed below) and therefore a number of functional statements in the claim. Nevertheless. the fact remains that the asserted claim is to an apparatus rather than a process.

But rejecting Harris' arguments does not decide the issue. The task still remains to determine whether "dot pattern modification" means simply any variation from the dot pattern that would otherwise appear on a video screen if only the character as generated by the character generator ROM were displayed, as Harris contends, or whether the term should carry a narrower meaning as the defendants contend.

The defendants' proposed interpretation has several parts. First the defendants urge that "[t]he phrases 'dot pattern modifications' and 'dot pattern modifier' are used interchangeably in Claim 1 of the '064 Patent." Defendants' Joint Post-Hearing Brief at 42. That is true. The second part of the defendants' interpretation says that those phrases "refer to video modifications that are applied to characters by superimposing a fixed matrix or dots that form the desired modification over the matrix of dots that form a character." That portion of the interpretation thus would essentially limit the claim to the embodiment disclosed in the patent. Neither the language of claim 1 nor anything in the specification or prosecution history supports such a narrow interpretation, and the defendants have, indeed, pointed to none. Once again, the claim has a number of means-plus-function elements (that are addressed further below), and when those elements are applied against the accused products during the infringement analysis under 35 U.S.C. § 112(6) the manner in which video modifications are accomplished *may* be a source of distinction. However, at this stage there is no justification for so limiting the interpretation of "dot pattern modifications."

The crux of the parties' arguments, of course, has been over the second sentence of the defendants' proposed interpretation, namely that "[d]ot pattern modifications do not include modifications which change the position of dots or which change the intensity of dots." *Id.* Harris characterized this pejoratively as a "negative limitation." Harris' Post-Hearing Brief at 7. In actuality, claim interpretation is not intended to rewrite claims, or insert limitations (negative or otherwise). Interpreting a particular claim term, however, *may* result in a narrower scope. Additionally, although claim interpretation is typically expressed in positive terms, there is nothing inherently or fundamentally wrong in stating that a particular claim term cannot be construed so broadly as, for example, to cover the prior art, or otherwise use terms of restriction to define the metes and bounds.

The true question here, though, is whether the patentee chose to use "dot pattern modifications" (and its variations) to refer to modifications that do not include modifications which change the positions of dots or which change the intensity of dots, namely whether the intrinsic record reveals that the patentee has exercised his right to be his own lexicographer. *Intellical Inc. v. Phonometrics, Inc.*, 952 F.2d 1384 (Fed. Cir. 1992). The analysis of a claim begins with the actual words of the claim which, of course, are the controlling focus. *Digital Biometrics, Inc. v. Identix, Inc.*, 149 F.3d 1335 (Fed. Cir. 1998). The Federal Circuit has also advised, though, that the "written description is considered, in particular to determine if the patentee acted as his own lexicographer, as our law permits, and ascribed a certain meaning to those claim terms." *Id.* But there are limits. In *Johnson Worldwide Associates, Inc. v. Zebco Corp.*, 175 F.3d 985, 990 (Fed. Cir. 1999), the court cautioned that in order to overcome the heavy presumption in favor of the ordinary meaning of a claim term, the "party wishing to use statements in the written description to confine or otherwise affect a patent's scope must, at the very least, point to a term or terms in the claim with which to draw in those statements."

Here, the defendants have done so. As already discussed above, the disputed claim term "dot pattern modifications" (and variations) "draws in" those statements in the specification where the patentee specifically uses that term. The court then may consult the specification to determine whether the patentee has used that term in a manner indicating that he intended to be his own lexicographer. Here that review reveals that the patentee, in addition to using "dot pattern modifications" (and variations) also used "non-dot pattern modifications," *i.e.*, something other than what he, the patentee, intended when he used the phrase "dot pattern modifications" (and variations). Specifically, the patentee said "non-dot pattern modifications, such as dot position or dot intensity." (Col. 1, line 23-27) Although Harris' arguments have been considered and are addressed above, those arguments are not persuasive. The patentee's statement provides an indication of what he intended by using the phrase "dot pattern modifications," *i.e.*, it did not include dot position or dot intensity.

During opening statements, Mr. Ebenstein, appearing on behalf of the Panasonic defendants, stated:

> And I would—I would add, Your Honor, that the term "dot pattern modification" is not a term that is a clear, well-defined

> meaning in the art. We actually did a search of all issued U.S. patents looking for the term "dot pattern modification," and it shows up in only two places, in the '064 patent and in the Bakula patent.

Hearing Transcript at 99. Attorney argument, of course, is not evidence, and the defendants failed to introduce any testimony or evidence of that search. Additionally, no reference to such a search appears in Dr. Rhyne's expert report, Hearing Exhibit 9. Thus, that statement must rest as attorney argument.

The defendants also refer to the Bakula patent and its prosecution history, Hearing Exhibit 6. As noted above, the Bakula patent was cited in the '064 patent in order to place the invention described in the '064 patent in context. Specifically, the patentee in the '064 patent stated that "[h]owever, no provisions were made [in the Bakula patent] to vary by program control any one of the plurality of enhancements. This is achieved in accordance with the present invention with circuitry illustrated in FIG. 2 to which reference is now made." (Col. 5, lines 29-33) According to the defendants, the term "dot pattern modification" was not used in the application maturing into the Bakula patent as originally filed. Defendants' Joint Post-Hearing Brief at 36. Also according to the defendants, the same attorney wrote and prosecuted both the '064 application and the Bakula application, and the same patent examiner examined both. *Id.* In the Bakula application, that attorney submitted an amendment to distinguish over prior art and that amendment added the claim term "dot pattern modification." The attorney argued that the prior art disclosed "enhancement code," and then stated: "Enhancement modifications include color, blinking, shift direction, and raster modification. It is clear then that contrary to the present invention, all of the proposed modifications or enhancements deal with non-dot pattern modification, such as dot position or dot intensity." Hearing Exhibit 6, Amendment of January 10, 1979 at 4. The defendants argue that the "meaning of 'dot pattern modifications' in the Bakula Patent is clear and required by its prosecution history. It is also clear, from the references to Bakula in the '064 Patent with regard to 'dot pattern modifications,' that the meaning of dot pattern modifications in the '064 Patent is intended to be the same as in the Bakula Patent." Defendants' Joint Post-Hearing Brief at 38. The defendants also note that the Federal Circuit has permitted reliance on the prosecution history of other applications/patents. *Sextant Avionique, SA. v. Analog Devices, Inc.*, 172 F.3d 817 (Fed. Cir. 1999)

Harris argues that it would be improper to rely on the discussion in the Bakula prosecution history simply because it is owned by the same multi-national corporation. Harris additionally points out that the prosecution history that the defendants rely on above was developed in the context of defining over a patent—the Inoue patent—that was being asserting against the pending claims in the Bakula application. Accordingly, Harris argues, the distinction between "non-dot pattern modifications" and "dot pattern modifications" made in the Bakula prosecution history should have no application to the '064 patent because the invention of the '064 patent is different from that of the Bakula patent. Harris further argues that the defendants' reliance on *Sextant* is misplaced because (1) the Federal Circuit acknowledged that the situation there was "unusual," (2) the prosecuting attorney there actually borrowed language from a recently allowed claim to distinguish over prior art, and (3) in *Sextant*, both patents were before the court.

Harris is correct that *Sextant* involved, by the Federal Circuit's own admission, an "unusual" case. Also, the situation in *Sextant* involved asserted prosecution history estoppel, rather than claim construction, and whether the record contained any plausible explanation for the addition of a limitation in a claim that was not related to distinguishing over prior art. Harris is also correct that it would be improper, as a general rule, to rely on the, prosecution history of other patents owned by a company in construing claims, and also that when such prosecution history is reviewed, any statements regarding particular claim terms must be construed in the context in which they were made.

Perhaps most importantly, however, the Bakula prosecution history adds little that cannot be gleaned from the specification of the '064 patent. First, the patentee chose to describe the environment of his invention, under the heading "Background and Field of the Invention," by using the phrase "non-dot pattern modifications" and by giving two examples, namely "dot position and dot intensity." (Col. 1, lines 23-27) Harris' response that the '064 patent itself is directed to video enhancements and uses "video" selectively in the claims is neither compelling nor persuasive, and must be rejected for the reasons discussed above. Secondly, the entirety of the specification describes modifications that are neither dot position nor dot intensity modifications. The Spartan reference to "highlighting" in Table I and Dr. Mercer's strained effort at explaining how that could be done within the limits of the disclosure of the '064 patent are not convincing. Mr. Ebenstein's statement regarding the lack of any mention of "dot pattern modifications" in the prior art, referenced above, would have added further support for the conclusion that this was a coined term that lacked a common or generally understood meaning, but, as noted, that statement was not supported by any testimony or documentary evidence. Accordingly, that statement is considered simply as attorney argument, albeit by an officer of the court, but without the opportunity for challenge through cross-examination. On the other hand, Harris similarly failed to introduce any evidence that "dot pattern modifications" had a general or recognized meaning in the art.

Accordingly, the special master recommends that the Court adopt the following interpretation for "dot pattern modifications" (and variations):

> A "dot pattern modification" consists of any variation from the dot pattern that would otherwise appear on the video screen if only the character as generated by the character generator ROM were displayed, but does not include dot position or dot intensity modifications.

2. *"means responsive to each said coded modifier word* * * *"

Claim 1 of the '064 patent-in-suit called for:

> means responsive to each said coded modifier word for providing dot pattern modifier video signals;

Both parties agree that this element is drafted in means-plus-function form, and therefore should be interpreted under 35 U.S.C. § 112(6). As noted above, however, the Federal Circuit in *Rodime* has required that the trial court construe disputed claim terms regardless of what the parties may have agreed. It is clear, however, that the claim element uses the word "means," and that "means" is followed by and connected with a stated function.

This portion of the claim also does not recite any "structure" that would take it outside the ambit of § 112(6). The last element in claim 1, however, also adds further qualifications to this "means:"

> said modifier word responsive means having N different selectable modes for providing one or more of N modifiers for modifying a said character with the dot pattern modification for each said modifier being determined by said coded modifier word.

The Federal Circuit in *Rodime* indicated that when a "means" clause is followed by a further description, that further description must be considered in deciding whether the element truly is a means-plus-function element to be construed under § 112(6). Here, however, that further description does not add any definable or recognizable structure, but simply further characterizes the "means." Accordingly, the special master would recommend that the Court construe this element as a means-plus-function limitation under § 112(6) as the parties have proposed.

The parties' respective positions are:

Harris	Joint Defendants
The structure corresponding to the "means responsive to each said coded modifier word for providing a dot pattern modifier video signal" in claim one of the '064 patent is PLA 82.[12]	The function of he [sic.] claim element is to output a dot pattern modifier video signal which represents one or more dot pattern modifiers selected in a two-step process in which a coded modifier word makes available a palette of dot pattern modifiers for selection, with one or more of these dot pattern modifiers being enabled by selecting one or more of the N different selectable modes. This claim element requires that there be N different selectable modes and that the coded modifier word have a capability of specifying N dot pattern modifiers where N is at least two. The structure disclosed for the coded modifier word responsive means is

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[12] Harris' Post-Hearing Brief at 9, Harris' Reply Brief at 10.

[13] Defendants' Joint Post-Hearing Brief at 44, 47.

PLA 82 and latches 80, 86.[13]

It is first readily apparent that the defendants propose adding—significantly—to the function recited in the claim. In essence, the defendants wish to add the actual steps recited in the specification for performing that function, presumably to bolster a non-infringement argument. But again, infringement *vel non* must await trial. The "function" in a means-plus-function claim is the function actually recited in the claim. *See, Micro Chemical, Inc.*, 194 F.3d at 1258. Here, the function recited in the claim is "for providing dot pattern modifier video signals."

The next step is to determine the disclosed structure that performs that function. The "means" is initially said to be "responsive" to a "coded modifier word." The "coded modifier word," according to the specification, is an eight bit word illustrated in Fig. 3. The first element of claim 1 says that there are "means for providing * * * at least one coded modifier word * * *." This element of claim 1, however, calls for a "means responsive to each said coded modifier word * * *." The specification explains that three different video overlays S_1, S_2 and S_3 are output from latch 80 and are supplied to PLA 82. The specification further explains that "[t]he meaning of the overlay itself is dependent on a programming word in latch register 86," *i.e.*, the coded modifier word. (Col. 5, lines 45-47) The "means responsive to each said coded modifier word" is thus clearly PLA 82. The claim element further more states, as noted above, that the function is "for providing dot pattern modifier video signals." Those dot pattern modifier video signals are shown in Fig. 2 as 0_0 through 0_7 being output from PLA 82. The specification further discloses that those dot pattern video modifier signals 0_0 through 0_7 are obtained by programming PLA 82. (Col. 7, lines 2-4) The disclosed structure is thus clearly PLA 82.

The defendants principally argue that latches 80 and 86 are necessary to perform the claimed function, but again the defendants add considerably more "function" than is required by the words of the claim. The defendants also argue that the flexibility or functionality of the system of the '064 patent-in-suit was the subject of arguments that Harris made during prosecution, and that additional functionality is not possible absent latches 80 and 86. Defendants point to the testimony of Dr. Rhyne saying that he testified that there no [*sic.*] disclosure—"None "whatsoever—in the specification for implementing the claimed function without using latches." Hearing Transcript at 390 In actuality, Dr. Rhyne's answer was not in response to a question regarding the claimed function.

Initially, Dr. Rhyne was asked, and then answered:

> Q. The next element is a means responsive to each said coded modifier word. What is the function of that element?
> A. Well, in that element alone it's providing dot pattern modifier video signals.

Hearing Transcript at 386-387. Dr. Rhyne as [*sic.*] then asked:

> Q. Can you identify the dot pattern modifier video signals?
> A. Yes. At the output of PLA 86 there's another one of these wide arrows that is

> specifically labeled as 0_0 through 0_7, and those are the outputs from the programmed logic array which are the dot pattern modifier video signals.
> Q. That's the PLA 82?
> A. I'm sorry if I misspoke.

Hearing Transcript at 387. That testimony is entirely consistent with construing PLA 82 as the disclosed structure that performs the function required by the instant claim element. Dr. Rhyne was then asked about his expert report and his opinion that the instant element was modified by the last element in the claim, namely:

> said modifier word responsive means having N different selectable modes for providing one or more of N modifiers for modifying a said character with the dot pattern modification for each said modifier being determined by said coded modifier word.

The further questioning indicates that Dr. Rhyne adds latches 80 and 86 to PLA 82 as the structure for performing the stated function only when he considers the further limitations contained in the last element of claim 1.

The last element of claim 1, however, adds further qualifications or limitations to the instant element. The instant element, in contrast, calls solely for "means responsive to each said coded modifier word for providing dot pattern modifier video signals." Here that "means" and its function are clear. It is furthermore clear that the disclosed structure for performing that stated function is PLA 82.

Accordingly, the special master would recommend that the Court adopt the following interpretation:

> The structure corresponding to the "means responsive to each said coded modifier word for providing a dot pattern modifier video signal" in claim 1 of the '064 patent is PLA 82.

That, unfortunately, is not the end of the matter. As noted above, the last element in claim 1 further defines that "means responsive" element. Harris has not separately addressed this limitation. Nevertheless, the language of this element of the claim is clear in requiring that the "means responsive" element must have "N different selectable modes for providing one or more of N modifiers for modifying a said character with the dot pattern modification for each said modifier being determined by said coded modifier word." Those "N different selectable modes," as described in the specification, are video overlays S_1, S_2 and S_3 shown in Fig. 2 as coming from latch 80. According to the specification:

> Preferably, the PLA 82 is programmed to supply stroke patterns at its output 0_0-0_7 in conjunction with the line scan count LC_0-LC_3 with the stroke pattern being determined by which one or more of the overlay outputs S_1, S_2 and S_3 is raised. The meaning of the selected one or more of the overlays S_1, S_2 and S_3 is determined by the

> program word E_1-E_8 obtained from latch register 86.

(Col. 7, lines 24-32) PLA 82 thus meets the terms of the claim, namely "having N different selectable modes [*i.e.*, overlays S_1, S_2 and S_3] for providing one or more of N modifiers * * * ." Those modes may be *supplied* by additional structure, *e.g.*, latch 80, but the claim is not drawn to a "means for supplying" those selectable modes. As drafted and allowed, claim 1 only requires that the "means responsive" *have* those selectable modes. Thus, even if these two elements are considered together, as the defendants suggest that they should, the result is that PLA 82 is the structure that satisfies the requirements of the claim.

It should be noted that § 112(6) provides that an "element in a claim * * * may be expressed as a means * * * for performing a specified function * * * and such claim shall be construed to cover the corresponding structure * * * described in the specification and equivalents thereof." Although means-plus-function elements are thus limited to some structure disclosed in the specification, patentees nevertheless have some flexibility in defining claim scope by choosing, for example, the appropriate claimed relative position of the "means" as well as the appropriate claimed function. A "means responsive" or a "means having," for example, states a different function and a different relative position than a "means supplying." Also, § 112(6) is clear in directing that such means-plus-function clauses are limited to the "corresponding structure," *i.e.*, that for performing the claimed function. Thus, the breadth of the functional language used will determine what structure is swept into the "corresponding structure." *See, Micro Chemical Inc.*, 194 F.3d at 1258.

3. *"means for mixing said video signals to provide a combined dot pattern video signal"*

Again, both parties agree that this element is drafted in means-plus-function form and should be construed under § 112(6). Upon independent review, the special master agrees that the element uses the word "means" followed by a stated function and that there is no structure recited that would take this element outside the ambit of § 112(6). Accordingly, the special master recommends that the Court construe this element as a means-plus-function element under § 112(6).

The stated function is clear, and the parties do not disagree. The stated function is "for mixing said video signals to provide a combined dot pattern video signal." Furthermore, the parties agree that the "corresponding structure" that performs that function is a set of OR gates shown in Fig. 2 by the reference numeral 90. Upon independent review, the special master agrees with the parties. Thus, there is no dispute and no need for the Court to enter any further explanation or interpretation of this claim element.

4. *"means responsive to said combined video signals for forming a video image * * *"*

Once again, both parties agree that this element is drafted in means-plus-function form and should be construed under § 112(6). The special master has independently reviewed that claim element and has concluded that the element obviously uses the word "means" followed by a stated function. Additionally, there is likewise obviously no structure recited in the claim that would cast this element outside the ambit of § 112(6). Thus, the special master recommends that the Court construe this element as a means-plus-function element under § 112(6).

Also, the stated function is clear, and the parties do not disagree. The stated function is "'for forming a video image with said video dot pattern modifications made thereto." Furthermore, the parties agree that the "corresponding structure" that performs that function is output shift register 60, video mixer 62, and CRT 24. Upon independent review, the special master agrees with the parties. Thus, there is no dispute and no need for the Court to enter any further explanation or interpretation of this claim element.

The defendants further state, however, that "the court should hold that Claim 1 requires that the video signals are combined before the output shift register." Defendants' Joint Post-Hearing Brief at 50. Harris has not responded. However, this claim element calls for a "means responsive to said combined video signals." The parties have agreed, and the special master has concurred, that the "corresponding structure" for the preceding "means for mixing" element is a set of OR gates indicated by reference numeral 90. The function of that means is to provide "a combined dot pattern video signal," namely the signal that the instant "means" is defined as being "responsive" to. The specification and drawings clearly disclose that the output from OR gates 90 go first to output shift register (OSR) 90.

Therefore, to the extent that any claim interpretation is necessary, the special master recommends that the Court construe claim 1 as requiring that the video signals are combined before the output shift register.

III. Final Report and Recommendation

Having previously submitted a draft report and recommendation pursuant to the parties' agreement (Hearing Transcript at 356-357), and having considered the parties' responses thereto, this is the special master's final report and recommendation.

The parties are reminded that this Court's Order of May 21, 1999, provides in part:

> 4. The special master's report and recommendation shall be subject to review by the Court upon application of any Party. Written objections must be submitted not later than fifteen (15) days after the report is filed. A response may be submitted not later than ten (10) days after objections are filed. The objections and response must be specific, concise, and supported by a memorandum of points and authorities. The deadline for filing objections and a response may be extended upon motion for good cause shown.

DATED: January 14, 2000

S/ Gale R. Petersen
Gale R. Peterson
Special Master

Civil Action No. 98-CV-2712

IN THE UNITED STATES DISTRICT COURT FOR THE NORTHERN DISTRICT OF TEXAS DALLAS DIVISION

Harris Corp. v. Sanyo North America Corp. et al.

Entered September 22, 2000

ORDER ACCEPTING REPORT OF SPECIAL MASTER ON MARKMAN HEARING

The Court, having been advised that there were no objections to the Special Master's Report on the Markman Hearing, hereby accepts the Report of the Special Master on the Markman Hearing and enters this order to reflect same.

It is hereby ORDERED that the Report of the Special Master on the Markman Hearing is entered by the Court as the order of this Court.

Signed this 21 day of September, 2000

/s/ Barbara M.G. Lynn
Honorable Barbara M.G. Lynn
Judge, United States District Court for the Northern District of Texas

ACCEPTED BY:
HARRIS CORPORATION

By: /s/ Brett C. Govett
Brett C. Govett
Counsel for Plaintiff

SANYO NORTH AMERICA CORPORATION,
SANYO MANUFACTURING CORPORATION,
SANYO VIDEO COMPONENTS (USA)
CORPORATION

By: /s/ E. Russell Nunnally
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SHARP ELECTRONICS CORPORATION
AND SHARP MANUFACTURING COMPANY
OF AMERICA

By: /s/ C. Glen Morris
C. Glen Morris
Thomas C. McGraw
Counsel for Sharp Defendants

Civil Action No. 3:98-CV-2712M.

UNITED STATES DISTRICT COURT,
N.D. TEXAS, DALLAS DIVISION.

HARRIS CORPORATION

v.

SANYO NORTH AMERICA CORPORATION et al

Entered: October 2, 2000

SPECIAL MASTER'S REPORT AND RECOMMENDATION ON THE PARTIES' MOTIONS FOR PARTIAL SUMMARY JUDGMENT

Gale R. Peterson, Special Master:

Harris Corporation ("Harris") asserts that the defendants infringe claim 1 of each of the two patents-in-suit, namely U.S. Patent No. 4,290,063 (the '063 patent) and U.S. Patent No. 4,290,064 (the '064 patent) both generally relating to the display of characters (letters and numbers) on a video display.

The parties have filed motions for partial summary judgment. Harris and the defendants[1] have filed cross-motions for summary judgment contending that summary judgment *vis-à-vis* infringement of claim 1 of the '063 patent is proper. Harris asserts that the accused products literally infringe claim 1, while the defendants assert that there is no infringement either literally or under the doctrine of equivalents. The defendants additionally assert that they are entitled to summary judgment of non-infringement, both literally and under the doctrine of equivalents, *vis-à-vis* claim 1 of the '064 patent. Harris responds that summary judgment *vis-à-vis* the '064 patent is improper because there are genuine issues of material fact that remain unresolved.

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[1] The Matsushita (Panasonic) entities are, apparently, no longer parties.

By Order of June 13, 2000, the parties' motions for partial summary judgment were referred to the special master for a report and recommendation. This is that report and recommendation. To the extent that Rules 52, 53(e) and 56, Fed.R.Civ.P., require findings of fact and conclusions of law, the following report and recommendation shall constitute those findings and conclusions.

I. *Prior Markman Proceedings*

By Order of May 21, 1999, the Court previously directed that "[a]ll pretrial matters involving patent claim interpretation are referred to the special master for report and recommendation." In accordance with that Order, a *Markman*[2] hearing was held during October 26-27, 1999, and a draft report and recommendation on claim construction was issued on December 31, 1999. That draft was circulated to the parties for their comments. Subsequently, a final report and recommendation on claim construction was issued on January 14, 2000 ("*Markman* Report"). None of the parties filed objections, and the Court adopted the *Markman* Report by Order dated September 21, 2000.

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[2] *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 116 S.Ct. 1384, 134 L.Ed.2d 577 (1996).

That *Markman* Report discusses the '063 and '064 patents in some detail, along with the parties' arguments on various disputed claim terms. That *Markman* Report also contains the recommended construction of those disputed claim terms. The parties all rely on the claim construction recommended in that *Markman* Report in asserting their respective infringement/non-infringement arguments, although both sides accuse the other at various times of ignoring or over-looking portions of the *Markman* Report.

Familiarity with that *Markman* Report will, therefore, be presumed. Portions of the *Markman* Report will, nevertheless, be used in the present report and recommendation to provide context for the parties' respective arguments.

II. Summary Judgment Standards

Summary judgment is appropriate "if the pleadings, depositions, answers to interrogatories, and admissions on file, together with the affidavits, if any, show that there is no genuine issue as to any material fact and that the moving party is entitled to a judgment as a matter of law." Fed.R.Civ.P. 56(c). "The evidence of the nonmovant is to be believed, and all justifiable inferences are to be drawn in his favor." *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 255, 106 S.Ct. 2505, 91 L.Ed.2d 202 (1986). *See also, Transmatic, Inc. v. Gulton Indus. Inc.*, 53 F.3d 1270, 1274 (Fed. Cir.1995). A genuine issue exists if the evidence is such that a reasonable jury could find for the nonmoving party. *Anderson*, 477 U.S. at 248; *General Mills, Inc. v. Hunt-Wesson, Inc.*, 103 F.3d 978, 980 (Fed. Cir.1997). A disputed fact is material if it might affect the outcome of the suit such that a finding of that fact is necessary and relevant to the proceeding. *See Anderson*, 477 U.S. at 248; *General Mills*, 103 F.3d at 980.

The Federal Circuit reviews a district court's grant of a motion for summary judgment *de novo*. *See Ethicon Endo-Surgery, Inc. v. United States Surgical Corp.*, 149 F.3d 1309, 1315 (Fed. Cir. 1998). The Federal Circuit reviews both elements of Rule 56(c) without deference, *see Sun Tiger, Inc. v. Scientific Research Funding Group*, 189 F.3d 1327, 1333 (Fed. Cir.1999), and reviews the record in a light most favorable to the non-moving party. *See C.R. Bard, Inc. v. Advanced Cardiovascular Systems, Inc.*, 911 F.2d 670, 672- 73 (Fed. Cir.1990). However, "[i]n reviewing a denial of a motion for summary judgment, we [the Federal Circuit] give considerable deference to the trial court, and will not disturb the trial court's denial of summary judgment unless we [the Federal Circuit] find that the court has indeed abused its discretion." *Elekta Instrument S.A. v. O.U.R. Scientific Int'l, Inc.*, 214 F.3d 1302, 1306 (Fed. Cir.2000).

When both parties move for summary judgment, the court must evaluate each motion on its own merits, resolving all reasonable inferences against the party whose motion is under consideration. *See McKay v. United States*, 199 F.3d 1376, 1380 (Fed. Cir.1999). "If there are no material facts in dispute precluding summary judgment, our [the Federal Circuit's] task is to determine whether the judgment granted is correct as a matter of law." *Eletka*, 214 F.3d at 1306.

A determination of infringement requires a two-step analysis. *See Gentry Gallery, Inc. v. Berk-line Corp.*, 134 F.3d 1473, 1476 (Fed. Cir.1998). "First, the claim must be properly construed to determine its scope and meaning. Second, the claim as properly construed must be compared to the accused device or process." *Id.*, quoting *Carroll Touch, Inc. v. Electro Mechanical Systems, Inc.*, 15 F.3d 1573, 1576 (Fed. Cir.1993).

Claim construction is an issue of law, *see Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 970-71 (Fed. Cir.1995)(*en banc*), *aff'd*, 517 U.S. 370, 116 S.Ct. 1384, 134 L.Ed.2d 577 (1996), that the Federal Circuit reviews *de novo. See Cybor Corp. v. FAS Techs., Inc.*, 138 F.3d 1448, 1456 (Fed. Cir.1998)(*en banc*). Determination of infringement, whether literal or under the doctrine of equivalents, is a question of fact. *See Bai v. L & L Wings, Inc.*, 160 F.3d 1350, 1353 (Fed. Cir.1998).

When evaluating a motion for summary judgment, the court must view the record evidence in light of the evidentiary standard of proof that would apply at a trial on the merits. *See Anderson*, 477 U.S. at 252-53. A patent enjoys a presumption of validity, 35 U.S.C. § 282, which can only be overcome through clear and convincing evidence of invalidity. *United States Surgical Corp. v. Ethicon, Inc.*, 103 F.3d 1554, 1563 (Fed. Cir.1997). A moving party seeking to invalid [*sic.*] a patent on summary judgment must, therefore, provide such clear and convincing evidence of invalidity that no reasonable jury could find otherwise. On the other hand, a moving party seeking to have a patent held "not invalid" on summary judgment must show that the nonmoving party, who bears the burden of proof at trial, failed to produce clear and convincing evidence on an essential element of a defense that a reasonable jury could rely on to invalidate the patent. *Eli Lilly and Co. v. Barr Laboratories, Inc.*, 222 F.3d 973, ____ (Fed. Cir.2000). Whether a patent complies with the best mode requirement is a question of fact.

Chemcast Corp. v. Arco Industries Corp., 913 F.2d 923, 928 (Fed. Cir.1990).

III. Recommendation

After review of the parties' submissions, the special master recommends that the Court:

- DENY Harris Corporation's Motion for Partial Summary Judgment of Infringement of U.S. Patent No. 4,290,063, and

- GRANT-IN-PART Defendants Joint Motion for Partial Summary Judgment to the extent that it seeks (1) summary judgment of no literal infringement of claim 1 of the '063 patent, and (2) summary judgment of no literal infringement of claim 1 of the '064 patent *vis-à-vis* accused products in which the mixing occurs after the OSR. The motion should be DENIED in all other respects.

IV. U.S. Patent No. 4,290,063

* * * * [omitted]

V. U.S. Patent No. 4,290,064

A. Defendants' Motion for Summary Judgment

Unlike the '063 patent where both sides moved for summary judgment, only the defendants are moving for partial summary judgment of non-infringement of claim 1 of the '064 patent. Harris contends that the defendants have not shown that they are entitled to judgment as a matter of law, and that there are genuine issues of material fact that preclude summary judgment.

B. Background

Although familiarity with the *Markman* Report, which discusses the '064 patent in some detail, is presumed, nevertheless the following description of the '064 patent is reproduced from the *Markman* Report for the sake of convenience. *Markman* Report at 34-36.

[see *Markman* Report, part II.A., Add 18a - 23a]

C. Claim 1

Claim 1 of the '064 patent provides as follows with the same bracketed clause identifiers used by the parties:

> 1. A video display system for displaying dot pattern images of data characters on a display screen with dot pattern modifications to the video characteristics thereof and comprising:
>
> [A] means for providing a data stream including a plurality of coded character words each representing a dot pattern image to be displayed and at least one coded modifier word each representing one or more of a plurality of N dot pattern modifiers;
>
> [B] means responsive to each said coded character word for providing dot pattern video signals for forming the dot pattern image represented thereby,

[C] means responsive to each said coded modifier word for providing dot pattern modifier video signals;

[D] means for mixing said video signals to provide a combined dot pattern video signal;

[E] means responsive to said combined video signals for forming a video image with said video dot pattern modifications made thereto; and

[F] said modifier word responsive means having N different selectable modes for providing one or more of N modifiers for modifying a said character with the dot pattern modification for each said modifier being determined by said coded modifier word.

D. Defendants' Asserted Bases for Non-Infringement

The defendants assert that they are entitled to summary judgment of non-infringement on four bases, namely:

(1) "the requirements of a plurality of dot pattern modifiers in claim limitation [A] and [F] are not satisfied because the accused receivers have only one such modifier, underlining."

(2) "Harris' placement of the coded modifier at the output of the display RAM of the accused receivers does not comport with the requirement that the coded modifier words be included in the data stream. In

> the same vein, the requirement in limitation [A] that the coded modifier words each represent one or more of a plurality of dot pattern modifiers is not satisfied because two data words are required to designate modifiers in the accused receivers."
>
> (3) "the Master has interpreted limitations [B]-[D] as requiring the mixing of the dot pattern modifications with the character dot patterns before the output shift register, however, Harris admits that in the accused receivers, the mixing occurs after the output shift register."
>
> (4) "in addition to these functional distinctions, the accused receivers lack a PLA or equivalent structure as specified in limitations [C] and [F]."

Defts. SJ Br. at 35.

E. Location of the "means for mixing"

Although this is the defendants' third point, it is most dispositive and is therefore addressed first. The remaining points will be addressed *infra.*

As discussed in the *Markman* Report, both parties agreed that the "means for mixing" limitation, element [D], was drafted in means-plus-function form and should be construed under § 112(6). On independent review, the special master agreed and recommended that the Court construe that element as a means- plus-function element under § 112(6). *Markman* Report at 52.

The stated function is clearly "for mixing said video signals to provide a combined dot pattern video signal," and the parties agreed that the "corresponding structure" that performs that function is a set of OR gates shown in Fig. 2 by the reference numeral 90. *Markman* Report at 52.

Similarly, the parties agreed that the "means responsive to said combined video signals for forming a video image * * * " limitation, element [E], was drafted in means-plus-function. The stated function is clearly "for forming a video image with said video dot pattern modifications made thereto." As noted in the *Markman* Report, the parties further agreed that the "corresponding structure" that performs that function is output shift register 60, video mixer 62, and CRT 24. Thus, the *Markman* Report concluded that "there is no dispute and no need for the Court to enter any further explanation or interpretation of this claim element." However, the *Markman* Report also noted that:

> The defendants further state, however, that "the court should hold that Claim 1 requires that the video signals are combined before the output shift register." Defendants' Joint Post-Hearing Brief at 50. Harris has not responded. However, this claim element calls for a "means responsive to said combined video signals." The parties have agreed, and the special master has concurred, that the "corresponding structure" for the preceding "means for mixing" element is a set of OR gates indicated by reference

> numeral 90. The function of that means is to provide "a combined dot pattern video signal," namely the signal that the instant "means" is defined as being "responsive" to. The specification and drawings clearly disclose that the output from OR gates 90 go[es] first to output shift register (OSR) 90.
>
> Therefore, to the extent that any claim interpretation is necessary, the special master recommends that the Court construe claim 1 as requiring that the video signals are combined before the output shift register.

Markman Report at 52. Thus, claim 1, as construed, requires mixing the dot pattern modifications with the character dot patterns before the output shift register (OSR). There is, apparently, no dispute that in at least some and perhaps the majority of the accused receivers, the mixing occurs after the OSR.[8]

Harris responds that "[w]hile the defendants may be correct for purposes of literal infringement, there are at least disputes of fact as to whether defendants' receivers are equivalent to the structure claimed and disclosed in the '064 patent," citing a declaration by Dr. Grimes. Dr. Grimes avers *inter alia* that "it is my opinion that an implementation in which the means for mixing occurs after the shift register is substantially equivalent to that which is claimed in the patent, so long as the means for mixing occurs before the bit series stream point in the device." Grimes Decl. ¶ 4.1. Thereafter, Dr. Grimes provides an explanation for his opinion.

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[8] The defendants state that apparently in some of the defendants' products, mixing does occur before the OSR. Defts. SJ Br. at 35 n. 19.

The defendants respond that the doctrine of equivalents cannot reach the accused devices because (1) doing so would violate the "all limitations" [sic. "all elements"] rule, (2) the location for the mixing means in the accused receivers is substantially different from that specified in claim 1, and (3) the accused receivers merely follow the prior art, *i.e.*, the doctrine of equivalents cannot be used to expand the scope of a patentee's rights so as to encompass the prior art. Defts. Reply at 9-11.

With respect to the defendants' first argument, the Federal Circuit *en banc* in *Pennwalt Corp. v. Durand-Wayland, Inc.*, 833 F.2d 931 (Fed. Cir.1987)(*en banc*), adopted the "all elements" rule, and the Supreme Court in *Warner - Jenkinson Co., Inc. v. Hilton Davis Chemical Co.*, 520 U.S. 17, 21, 117 S.Ct. 1040, 137 L.Ed.2d 146 (1997), confirmed that the determination of equivalence should be applied as an objective inquiry on an element-by-element basis. However, the Federal Circuit has not required a one-to-one correspondence. *See, Ethicon Endo-Surgery, Inc. v. United States Surgical Corp.*, 149 F.3d 1309 (Fed. Cir. 1998). It is not immediately clear that applying the doctrine of equivalents here would necessarily violate the "all elements" rule. In any event, that cannot be resolved on the current record.

With respect to the defendants' second argument, the current record is not sufficiently developed to resolve, on summary judgment, the "substantiality" of the differences. Dr. Grimes, for example, avers that the "choice of where the mixing occurs is based on the technology used in the implementation, any number of which could fall within the claims of the patent. What is important is that the mixing and conversion to a serial data stream occur before Element 62, the Video Mixer Intensity Control. This is because the further modifications that occur to the video signal from the decoder 66 and the attribute register 64 and other structures are outside the claims of the patent, as Harris has agreed." Grimes Decl. ¶ 4.6. On the current record, the "substantially" of the differences is a triable issue of fact for the jury.

As for the third argument, the defendants are correct that the doctrine of equivalents cannot be used to ensnare the prior art. But claims, for both validity and infringement, are construed as a whole. All of the individual claim elements may, in fact, appear somewhere in the prior art, but so long as the claimed invention as a whole is novel and unobvious over the prior art, that is all the law requires. Harris correctly points out that merely identifying one aspect of one claim element that is found in the prior art does not preclude consideration, and possible application of, the doctrine of equivalents. Harris' Opp. at 20.

In light of the foregoing, the defendants' motion for partial summary judgment should be granted-in-part, namely that the defendants are entitled to judgment as a matter of law that the accused products in which the mixing occurs after the OSR do not literally infringe claim 1 of the '064 patent for the foregoing reasons. Whether those accused products infringe under the doctrine of equivalents, on the current record, is an issue for the jury.

F. Defendants' Other Arguments

The defendants' remaining three arguments:

(1) "the requirements of a plurality of dot pattern modifiers in claim limitation [A] and [F] are not satisfied because the accused receivers have only one such modifier, underlining."

(2) "Harris' placement of the coded modifier at the output of the display RAM of the accused receivers does not comport with the requirement that the coded modifier words be included in the data stream. In the same vein, the requirement in limitation [A] that the coded modifier words *each* represent one or more of a plurality of dot pattern modifiers is not satisfied because two data words are required to designate modifiers in the accused receivers."

* * * *

(4) "in addition to these functional distinctions, the accused receivers lack a PLA or equivalent structure as specified in limitations [C] and [F]."

have been considered, but the current record does not indicate that the defendants are entitled to judgment as a matter of law as to either literal infringement or infringement under the doctrine of equivalents based on those arguments and accompanying declarations, individually or collectively. In each instance, Harris has raised at least one genuine issue of material fact that cannot be resolved on the summary judgment proof and briefing currently before the Court. Further, the parties are reminded that *Markman* claim construction serves only to resolve disputed claim terms or phrases. *Markman* claim construction does not rewrite the claims, *i.e.*, if claims are in means-plus-function format requiring construction under § 112(6), resolving the meaning of a particular term or phrase does not rewrite the claims into non-means-plus-function format. The ordinary "rules" for determining both literal infringement and infringement under the doctrine of equivalents for claims containing means- plus-function elements apply regardless of whether the court has construed a term or phrase in a claim.

G. Conclusion

The defendants' motion for partial summary judgment should be granted-in-part, *i.e.*, that the defendants are entitled to judgment as a matter of law that the accused products in which the mixing occurs after the OSR do not literally infringe claim 1 of the '064 patent for the foregoing reasons. On the current record, whether those accused products infringe under the doctrine of equivalents is an issue for the jury. In all other respects, the defendants' motion should be denied.

* * * * [omitted]

Signed in San Antonio, Texas this
29th day of September, 2000.

S/ Gale R. Peterson
Gale R. Peterson
Special Master

Civil Action No. 98-CV-2712

IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF TEXAS
DALLAS DIVISION

Harris Corp. v. Sanyo North America Corp. et al.

Entered December 4, 2000

ORDER ADOPTING SPECIAL MASTER'S REPORT AND RECOMMENDATIONS

After making an independent review of the pleadings, files and records in this case, and the Special Master's Report and Recommendations, the court finds that the Special Master's Report and Recommendations are correct, and they are hereby adopted as this Court's Opinion, including the determination, findings and conclusions contained therein, on the Plaintiff's and Defendants' Motions for Summary Judgment; provided however, the Court clarifies that the '064 patent requires that the mixing of the video signals occur before the output shift register.

SO ORDERED this 1st day of December, 2000.

/s/ Barbara M.G. Lynn
BARBARA M.G. LYNN
UNITED STATES DISTRICT JUDGE

Civil Action No. 98-CV-2712

IN THE UNITED STATES DISTRICT COURT FOR THE NORTHERN DISTRICT OF TEXAS DALLAS DIVISION

Harris Corp. v. Sanyo North America Corp. et al.

Entered December 4, 2000

JUDGMENT

This action came on for consideration by the Court, and the issues having been duly considered and a decision duly rendered,

It is ORDERED, ADJUDGED and DECREED that Plaintiff's Motion for Partial Summary Judgment is **DENIED**, and Defendants' Motion for Partial Summary Judgment is **GRANTED** to the extent that the Court finds that Defendant has (1) not literally infringed claim 1 of Plaintiff's '063 patent; and (2) not literally infringed claim 1 of the '064 patent with respect to accused products in which mixing occurs after the output shift register.

It is FURTHER ORDERED that the Clerk shall transmit a true copy of this Judgment and the Order adopting the Special Master's Report and Recommendations to the parties.

SO ORDERED this 1st day of December, 2000.

/s/ Barbara M.G. Lynn
BARBARA M.G. LYNN
UNITED STATES DISTRICT JUDGE

Civil Action No. 98-CV-2712

IN THE UNITED STATES DISTRICT COURT FOR THE NORTHERN DISTRICT OF TEXAS DALLAS DIVISION

Harris Corp. v. Sanyo North America Corp. et al.

Entered December 26, 2001

ORDER

On September 12, 2001, Defendants filed their Renewed Motion for Judgment as a Matter of Law, or, in the Alternative, Motion for New Trial. After having considered the Motion, along with the Response and Reply filed thereto, the Court is of the opinion that the Motion should be DENIED.

SO ORDERED.

DATED: December 26, 2001.

/s/ Barbara M.G. Lynn
BARBARA M.G. LYNN
UNITED STATES DISTRICT JUDGE
NORTHERN DISTRICT OF TEXAS

Civil Action No. 98-CV-2712

IN THE UNITED STATES DISTRICT COURT FOR THE NORTHERN DISTRICT OF TEXAS DALLAS DIVISION

Harris Corp. v. Sanyo North America Corp. et al.

Entered January 14, 2002
as of December 26, 2001

JUDGMENT NUNC PRO TUNC

This Judgment Nunc Pro Tunc is entered to correct certain omissions from the original Final Judgment, entered on December 26, 2001.

A jury trial was conducted in this Court from August 20 through August 31, 2001. After the conclusion of Plaintiff's case-in-chief, the Court granted Defendants' Motion for Judgment as a Matter of Law dismissing Defendant Sanyo Video Components (USA) Corporation from the suit. On August 31, 2001, the jury delivered a verdict in favor of Plaintiff Harris Corporation ("Harris") on its claims against the remaining Defendants, Sanyo Manufacturing Corporation and Sanyo North America Corporation (the "Sanyo entities"). Having considered the record, the jury instructions, the interrogatories and answers thereto, the Court's findings of fact and conclusions of law, and the relevant authorities, the Court finds sufficient evidence to support the jury's verdict in all respects, and finds that judgment on that verdict in favor of Harris is legally appropriate.

1. In light of the jury's verdict, the Sanyo entities are to pay, jointly and severally, a total of $7,000,000 to Harris. In its discretion, the Court declines to award prejudgment interest on that sum.

2. The Court finds that Harris is entitled to post-judgment interest on the damages owed to Harris by the Sanyo Entities, from the date of the original Judgment, entered on December 26, 2001, until paid, at the rate of 2.23% per annum.

3. Harris is also awarded all taxable court costs.

4. The Sanyo entities shall take nothing on their counterclaims.

5. Harris's claims against Defendant Sanyo Video Components (USA) Corporation are dismissed with prejudice.

6. All other relief not expressly granted herein is denied.

It is further ordered that this Judgment Nunc Pro Tunc shall be effective on and shall be entered as of December 26, 2001, the date on which the original Judgment was entered in this case.

SIGNED this 14 day of January, 2002.

/s/ Barbara M.G. Lynn
BARBARA M.G. LYNN
UNITED STATES DISTRICT JUDGE
NORTHERN DISTRICT OF TEXAS

02-1210, - 1211

UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT

HARRIS CORPORATION

v.

SANYO NORTH AMERICA, et al.

December 29, 2003

ORDER

A combined petition for panel rehearing and for rehearing en banc having been filed by the APPELLANTS, and a response thereto having been invited by the court and filled by the CROSS-APPELLANT, and the petition for rehearing having been referred to the panel that heard the appeal, and thereafter the petition for rehearing en ban and response having been referred to the circuit judges who are in regular active service,

UPON CONSIDERATION THEREOF, it is

ORDERED that the petition for panel rehearing be, and the same hereby is, DENIED and it is further

ORDERED that the petition for rehearing en banc be, and the same hereby is, DENIED.

The mandate of the court will issue on January 5, 2004.

FOR THE COURT
Jan Horbaly
Clerk

CONSTITUTIONAL, STATUTORY, AND REGULATORY PROVISIONS INVOLVED

Article III, section 8, clause 8 of the U.S Constitution provides:

> The Congress shall have power ... To promote the progress of science and useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries.

28 U.S.C. § 1338(a) provides:

> (a) The district courts shall have original jurisdiction of any civil action arising under any Act of Congress relating to patents, plant variety protection, copyrights and trademarks. Such jurisdiction shall be exclusive of the courts of the states in patent plant variety protection and copyright cases.

35 U.S.C. § 111 provides, in pertinent part:

> § 111 Application
>
> (a) In General.—
>
> (1) Written application.— An application for patent shall be made, or authorized to be made, by the inventor, except as otherwise provided in this title, in writing to the Director.

(2) Contents.— Such application shall include—

(A) a specification as prescribed by section 112 of this title;

* * * *

35 U.S.C. § 112 provides, in pertinent part:

§ 112. Specification

[¶1] The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention.

[¶ 2] The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

* * * *

35 U.S.C. § 131 provides:

The Director shall cause an examination to be made of the

> application and the alleged new invention; and if on such examination it appears that the applicant is entitled to a patent under the law, the Director shall issue a patent therefore.

35 U.S.C § 132(a) provides:

> (a) Whenever, on examination, any claim for a patent is rejected, or any objection or requirement made, the Director shall notify the applicant thereof, stating the reasons for such rejection or objection or requirement, together with such information and references as may be useful in judging of the propriety of continuing the prosecution of his application; and if after receiving such notice, the applicant persist in his claim for a patent, with or without amendment, the application shall be reexamined. No amendment shall introduce new matter into the disclosure of the invention.

35 U.S.C. § 271(a), provides:

> Except as otherwise provided in this title, whoever without authority makes, uses, offers to sell, or sells any patented invention, within the United States or imports into the United States any patented invention during the term of the patent therefore, infringes the patent.

47 U.S.C. §3.3 (u) provides:

> Except as otherwise provided in this chapter, the Commission from time to time, as public convenience, interest, or necessity requires, shall—
>
> (u) Require that apparatus designed to receive television pictures broadcast simultaneously with sound be equipped with built-in decoder circuitry designed to display closed-captioned television transmissions when such apparatus is manufactured in the United States or imported for use in the United States, and its television picture screen is 13 inches or greater in size.